

SOAP

A MONTHLY MAGAZINE

for Manufacturers of Soaps of All Kinds, Disinfectants, Household Insecticides, Cleansers,
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SOAP

The Editor's Page

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Similarity of Trade Names

A CASE has recently come to light where a small manufacturer in the West placed on the market a product identical in name to a widely advertised article of country-wide distribution. Although the products were designed for different purposes and did not compete in any way, the original owner of the name took steps to prevent the second manufacturer from using it. The legal aspects of the case are not up for discussion here. The questions are—why did a manufacturer select a name which he must have known somebody else was already using, or if by any chance, he did not know, why did he not take the trouble to find out?

New names for all types of products are being coined every day. It is inevitable that two or more persons should think of the same name for a product or for two different products. It is likewise inevitable that two or more names should be selected which are sufficiently alike to cause confusion in the minds of the general public. This is particularly true where names are of a somewhat descriptive character.

Is there really any rhyme or reason in the mass of trade mark litigation which is constantly in progress in this and other countries? Could not the exercise of ordinary business caution prior to launching a new product avoid later trade mark difficulties? A new product, heavy advertising and selling expense to popularize the product and the name—and then, throwing the whole thing overboard because of duplication or too great a similarity in name. A preliminary search of the Patent Office files can be made at little or no cost, and why a manufacturer will put out a new product bearing a coined name without taking this precaution, is hard to understand. Of course, there are those in the past who have chosen a name similar to some well-known and successful product in a deliberate attempt to confuse the public mind and ride on the wave of success of the original product. This is just ordinary crookedness, and is not in the same class with a manufacturer who is

more or less an innocent victim of his own carelessness. Too many small manufacturers—those who can least afford expensive litigation—find themselves in hot water which could easily have been avoided. Find out first if somebody else already owns the same or a similar name. If they do, why flirt with legal difficulties by using it? There is still a whole world of names to choose from.

Discounts for Volume

THE question of relative prices for large orders and small orders is always a serious one for every business house. In ninety per cent of cases, it is the small order which we hear condemned as the thief of profits. The big order at a substantial discount under list prices is seldom mentioned. As an authority on costs in another trade once put it: "One extreme which we find to-day is that there is a willingness to give a man enormous discounts on volume business without in any way making these discounts comparable with the reduced cost which comes through volume. I recently asked a manufacturer why he was giving certain discounts on certain orders and he hemmed and hawed around a little bit and said, "I don't know, it just seems to me he ought to get a discount."

Most certainly a purchaser of a large volume of goods where the cost of production of the goods is reduced because of the quantity, and the proportionate share of overhead is low for the same reason, should benefit because of his large order. At the same time, there is no reason why a large order should be sold at a price which squeezes all the profit out of the transaction, simply because it is a large order. Large orders should naturally carry a lower profit per pound than small ones. Competition most always makes this far from a sales theory; it makes it a hard reality. There is a distinct difference, however, between a lower profit and no profit at all. Manufacturers who cut their prices on large volume should know exactly how much to cut. A fancy discount based on a guess may mean the difference between profit and loss.

The purchaser of medium size quantities is apparently the fellow who supplies most of the profit for manufacturers. Small orders eat up profits in overhead; large ones in fancy discounts and the like. Not unless true cost and selling expense are known exactly, do all three carry their proper share of the burden.

"In the Rottenest Container. . ."

INSTANCES where a poor package acts as a definite drawback in the sale of a product of good quality have recently been called to our attention by people who probably represent the average consumer. The reactions of the individuals in question probably are the reactions of thousands of others to the very same features of the packages. In one case, the product was a shaving soap. "It is about the best product of its kind I have ever used, but I'll be hanged if I am going to bother with all that mess in order to use it. The soap certainly does the job well, but it is too much trouble to use, so I am going to change over to something else." Then there is the case of a shampoo. "The finest product of its kind in the rottenest container I have ever seen. I do not see how they could devise a worse container or closure if they deliberately tried to do so."

There are many poor packages on the market. Changes and improvements are constantly being made, but some manufacturers refuse to change the style of their containers because of the association of ideas between the product and the original package in the mind of the ultimate consumer. Nevertheless, many products which have had a large sale over a period of many years have had their containers altered more than once in keeping with newer ideas and more convenient usage, and the improvements have not acted, even temporarily, as a check on sales.

Competition in modern merchandising is just as much competition of package convenience as it is competition in quality of the goods. In view of the fact that you may feel secure that you have the finest product on the market, you may believe that it will sell *in spite of its package*. Or, you may consider the package a good one, when the consensus of opinion elsewhere may be just the reverse. Sales resistance is great enough under any conditions, so why add to it by having to sell your product *in spite of* anything. The package should help, not hinder. Let some unbiased outsiders check up on your containers as compared with competing articles

once in a while. "The finest product . . . in the rottenest container" may be one of your pet products.

The Demonstrator

ANOTHER large department store of country-wide reputation has eliminated the private demonstrator, so-called, from its toilet goods and soap department. These demonstrators who are placed behind the counters of department and chain stores by manufacturers of the various articles sold, and without cost to the department store, are not a new problem. Some four or five years ago, there was a great deal of agitation over the question of the "hidden demonstrator" as they were called. At that time, a number of manufacturers in various fields dispensed with the practice of using this method of selling, or quite definitely labelled their demonstrators with a button carrying the name of the company whom they represented.

To the average purchaser on the other side of the counter, a demonstrator is a saleswoman in the employ of the store. Her recommendations for or against any article are taken as the views of an unbiased expert, when in reality, such recommendations represent usually a biased sales talk for the product of the manufacturer whom she represents.

The reason given for this latest elimination of the demonstrator was a conflict with store sales policies. The store was apparently called upon too often to stand behind sales claims made by demonstrators, which it may have found from experience was a difficult matter. It is reported in this connection that some manufacturers refused to sell certain stores because their goods had been the victims of misrepresentation among the demonstrators. The whole thing evidently became too involved over a period of years for the high plane merchandising policy for which the store in question is known. The queer thing is why four or five years were required to reach the decision recently announced.

Various state and district dry cleaning associations will meet over the next few months in the following localities: Ohio State Association, Neil House, Columbus, Oct. 29, 30 and 31; Southwestern States Association, Hotel Mayo, Tulsa, Okla., Nov. 19, 20 and 21; Missouri State Association, Jefferson City, Mo., Nov. 19 and 20; Southeastern States Association, Jackson, Mississippi, Dec. 3, 4 and 5. The National Association will meet in Memphis, Tenn., on Jan. 15, 16 and 17, 1929.

The Outlook in

The Alkali Market for 1929

A Discussion of Production, Consumption, and Other Basic Conditions Which May Influence Prices Next Year



HIS is about the time of year when soapmakers begin to speculate as to what their alkalis for next year are going to cost them. When it is realized that the alkali bill of the American soap industry each year runs between thirteen and fifteen million dollars, there is little wonder that the large soap makers begin to do their alkali price calculating early. Based on figures for the past year or two, the soap industry buys roughly seven million dollars worth of caustic soda per annum and an equal value of soda ash. Considering all industries during recent years, there has been an inclination to buy a larger proportion of caustic soda when compared to total alkali purchases, but among the soapers, increased consumption has been about equally divided between ash and caustic.

For years, chemists have held that the consumption of sulfuric acid of any nation is a direct barometer of general industrial conditions in that country. So varied are the uses of caustic soda and soda ash, almost as great in number as sulfuric acid, that there is certainly no reason why the alkalis are not just as accurate a barometer of conditions. They enter into the production of most everything from steel rails to coffee cake. If heavy alkali consumption is an indication of good business and general prosperity, then the reverse ought to be true, namely, good business and industrial activity should mean heavy consumption of ash and caustic. If we can guess how good business is going to be in 1929, then we ought to be able to guess something about the demand for alkalis.

Demand Should Equal 1928

THIS far—although it is rather early for predictions—the number of business men whom we have heard express the fear that conditions may be bad next year, has been exactly nil. Business today more or less makes its own conditions anyway, and the likelihood of any marked slump in 1929 does not appear on the horizon. Basic conditions are such, and there is no reason to believe that they

should change over the next six months, that the expressed outlook for 1929 by those who have the indicators before them, is that it will be at least as good as 1928. Demand for basic commodities should be equal at least to what it has been thus far this year.

Granted that the consumption of alkalis will be equal to 1928 next year, this is in reality only half of the picture. The other half is production. If production is increased appreciably next year, and there is not an equal expansion in demand, the subsequent results need no explanation. Thus far in 1928, the alkali markets have been reported by authorities basically firmer than they have been at any time during the past three or four years. The steady creeping upward in consumption in recent years has been due in part to new uses, particularly in rayon manufacture, and in expanded use for one or two new chemical developments. There has also been expanded consumption in old uses, such as glass, paper, and soap. Thus far in 1928, the consumption of alkalis in soap manufacture in the United States is reported to approximate a five per cent increase over 1927 figures.

Chlorine and Electrolytic Caustic

INCREASED production of caustic soda during the past few years has been to a great extent electrolytic caustic. Some of it has been straight out and out plant expansion, production increases for definite and special needs for new caustic as such, but it is a safe guess that a larger part of it has been primarily to supply an increased demand for chlorine. The new and expanded uses for chlorine undoubtedly have a very direct bearing on the caustic soda situation, and are likely to have an increasing effect as time goes on. There are plants in the country which have a heavy demand for chlorine, but a comparatively small use for caustic soda. In cases where they manufacture their own chlorine, the disposal of the surplus caustic soda naturally becomes a problem for the alkali industry

if the total chlorine requirements tend to show anything like a steady increase.

Of course, there are instances where caustic soda is the primary product sought after in the electrolytic process. A case in point is the alkali and chlorine plant which was put into operation on close to double former capacity last year, chiefly to supply caustic liquor for use in the manufacture of ethylene glycol. At the same time, as chlorination of the ethylene gas is also supposed to be a step in the manufacture of ethylene glycol, the chlorine produced is also being used in the same process. In most every plant which is electrolyzing salt to produce chlorine and caustic, that is, in chemical plants outside of the chief alkali manufacturers, there is usually an excess of one product or the other. In the last few years, there appear to have been more cases where an excess of caustic soda was available over and above plant requirements, and fewer cases of chlorine excess.

Effect of "Outside" Production

LOOKING back over the past ten years since the end of the war, there seems to have been hardly a year which went by without some talk of the dire effects which by-product caustic, or rather the caustic soda output of plants not primarily in the alkali business, was going to have on the market the following year. Each year, however, went by without this "outside" production of alkali causing any serious or prolonged weakening of the market. Of course, back in 1920 and 1921, when the excess of available alkali tonnage was admittedly large and the whole situation depressed, the market was a very weak affair, but those were years when business depression was acute and also years during which war-time capacity had not been adjusted to peace-time requirements. Since that time, in spite of expressed expectations to the contrary in alkali circles, the expansion of consumption has apparently been more than sufficient to absorb "outside" alkali production without seriously interfering with the business of the regular alkali manufacturers. Each year has seen this "outside" production evidently having less effect on the alkali market. Where the contract price for caustic was cut from \$3.10 to \$3.00 for 1927 shipments, and from \$3.00 to \$2.90 for 1928 shipments, this seems to have been due more to increased output among the alkali manufacturers themselves than to any outside influence. There have been for a number of years past sales of "outside" brands at prices under the regular alkali schedules, and there prob-

ably always will be as long as there is a competitive schedule for so-called "standard brands." This "outside" underselling, however, appears to have become less conspicuous during the past few years, and if it has any marked effect on the market to-day, it is not readily noticeable.

Producers Hold the Reins

THE effect which the various influences are likely to have on alkali prices for next year, is not liable to be any different from that which they have to-day. The large alkali producers seem to have a tighter grip on the reins than at any time since the war. They all know the production and consumption outlook for 1929, and they know what they will have to get for alkalies or what competition will permit them to get. From the angle of the consumer on the outside, there appears to be little apparent reason for changing the price schedules which have been in effect during 1928. At the same time, this was also the appearance which the price situation had a year ago, and yet certain large consumers expressed the belief early in November, 1927, that the price was going to be lower for 1928. From those who would express an opinion this year regarding 1929 figures, came the view that there was nothing at this time which should dictate any change in alkali prices and that a revision one way or the other was decidedly unlikely.

Comparative Consumption

ALKALI consumption of the soap industry during the past four years has approximated 100,000 tons of caustic soda and 200,000 tons of soda ash per year. This has been approximately 20 per cent of the total production of caustic soda and about 14 per cent of the total ash production. In caustic, the soap industry has continued to be the leading consumer, while in the case of ash, the soap industry remains second to the glass industry as the leader. A great portion of new production during the past two or three years in alkalies has gone into what are comparatively new uses, particularly rayon, thus reducing the percentage of the total output consumed by the other leading consuming industries such as glass, soap, paper, etc.

During the past four years, the total production of alkalies has been roughly as follows:

Total Caustic Soda Production in U. S.

1924	410,000 tons
1925	500,000 tons
1926	545,000 tons
1927	550,000 tons

Total Soda Ash Production in U. S.

1924	1,190,000 tons
1925	1,370,000 tons
1926	1,495,000 tons
1927	1,525,000 tons

Of these totals, the soap industry consumed a goodly portion. Such figures as are available from authoritative sources indicate that the following figures approximate the consumption of the soap industry:

Caustic Soda Consumed in Soap

	Tons	% of Total Production
1924	90,000	21.8
1925	95,000	19.0
1926	98,000	17.9
1927	108,000	19.5

Soda Ash Consumed in Soap Industry

	Tons	% of Total Production
1924	175,000	14.7
1925	200,000	14.6
1926	200,000	13.4
1927	225,000	14.1

Competition from Foreign Glycerin

Keen competition is being offered by foreign glycerin suppliers in the American market, according to the market report of Parsons & Petit, New York, under date of Oct. 5, which says: "Business in domestic glycerin has been very much limited, this week. There has been some sold at 12½¢, but many of the buyers have turned their attention to the foreign article, of which, several purchases have been made, for October to December shipment, at the equivalent of as low as 12¢ per lb., duty paid, laid down here, net cash and possibly a shade below, that figure. The foreigners seem determined to get what U. S. business they can and have cut the price to a point, where the domestic makers have lost interest. Just how much is to be had abroad, it is difficult to say, but there seems to be plenty, and while they are naming the price mentioned, it is going to be hard to sell domestic goods, unless the refiners here, are willing to lower their views, and this the large makers have refused to do for some time. The buying on the other side, for shipment here, has been mostly for the anti-freeze trade and it does seem that there has been a sufficient accumulation in this line already and that in addition, there are potential supplies, beyond what can possibly be used, even if the Winter is extreme and of long duration. Should these weather conditions not appear, it is said that the makers will have large stocks on their hands at the end

of the season, for the report is, that they have sold "requirements" in many cases. So far as the explosives business is concerned, there are as yet no indications of any urgent need, but there must be some buying, for delivery during the last two months of the year, at least; to just what extent these necessities will run, it is impossible to say. *Crude.* The domestic market is unchanged. For the time being there are buyers at 7½¢, basis of 80%, loose, delivered at buyers' works and 8½¢ to 8¾¢, basis of 88%, for Saponification. European offerings of Lye, are at the equivalent of 7¾¢, basis of 80%, loose, duty paid, ex-dock here. The foreign markets are not at all strong and it may be, that we shall have lower prices yet, although on the other hand, buying from this side, will encourage the foreigners if it reaches any volume and may result in a reaction in their market."

Developing Malaya Palm Oil

In the annual report of the Secretary of Agriculture for the Straits Settlements and the Federated Malaya States, it is stated that during 1927 there has been continued development in planting and developing palm oil estates. There were at the end of 1927 twenty-four oil palm estates in existence, an increase of five over 1926. Of these, three have over 2,000 acres planted, and ten have between 400 and 800 acres planted. The total area planted to oil palm in British Malaya is 18,321 acres and the additional area alienated to oil palm estates totals about 18,500 acres, while the authorities have provisionally reserved for this industry about 118,000 acres more, but this is not yet alienated and it is not even known whether it is all suitable for palm oil production. Four up-to-date oil extraction plants are now in operation on estates, two more than in 1926, and in 1927 they produced 915 tons of palm oil and 185 tons of kernels, as compared with 751 tons of oil and 108 tons of kernels in 1926. In 1928, it is expected, there will be a considerable increase in production, as new areas will come into bearing and the machinery on two estates will be working throughout the year for the first time. The above information was submitted to the United States Department of Commerce by Trade Commissioner Don C. Bliss, Singapore, S. S., August 10, 1928.

Fisher Soap Sales, an Ohio corporation, has filed a certificate in New York preparatory to starting a New York State sales campaign.

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Oil Lavender Flowers Barreme

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The "de luxe" Lavender, the flowers having been harvested at the highest altitudes.

Oil Lavender Flowers Standard

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An oil improved by aging.

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Lavender from high altitudes. Is the typical quality recommended for perfumes in general.

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Typical quality for Soaps.

Say you saw it in SOAP!

Soaps in Modern Textile Processing

Types and Characteristics of Soap Products for Scouring, Bleaching and Dyeing Operations

By M. DANN



THE general qualities desirable, in a soap to be used as a detergent for textile fibres, are outlined by J. F.

Tonn (7) as follows: (a) non-injurious to fibres. (b) effective for removal of oils and fatty matter. (c) efficient water-softener. (d) readily soluble. (e) effective at low concentration. (f) free from undesirable effects on subsequent operations. (g) free rinsing material. (h) available at low cost.

Trotman (1) advises that, in general, a soap with low titer is best, and gives definite specifications for soap to be used with each type of fibre. These specifications will be described for wool, silk and cotton. The best soap for use in wool scouring is a neutral potash olive oil soap. Because of the high cost of olive oil soap, there may be used a soap made with olein or vegetable oils, or even curd soaps. The following specifications must be observed, because the quality of the soap is a most important consideration: (1) The soap must be very freely soluble. (2) It must have a high emulsifying power. (3) Free alkali must be absent, as it is very damaging to the fibres. (4) Sodium or potassium silicates must be entirely absent. (5) Rosin should be absent. (6) Unsaponified or unsaponifiable oils must be absent, as they detract from the emulsifying power.

Wool, before scouring, contains the following impurities: (1) Wool fat. (2) Suint, or dried perspiration. (3) Dirt and vegetable debris. Although suint would be soluble in water alone, the other impurities require a good emulsifying agent. For this purpose, soaps are used almost entirely. Direct saponification is found to be highly injurious to the fibres.

Scouring Wool

THE process of scouring the raw wool involves the use of a washing machine, usually having a long trough, with a false bottom, and equipped with rakes and, at the exit, a wringer. The soap solution is used at a temperature between 35 and 40 degrees C. The wool is made to travel forward beneath the surface of the liquor. The solution is agi-

tated to aid in emulsification of the fat. A large part of the dirt goes through the holes into the bottom of the trough. The excess liquor is lightly squeezed out by the wringer. Oil and fat can be recovered from the wash liquor. Lanolin is one of the by-products of this process.

The wool, after spinning or weaving, often requires to be scoured, especially if oil has been used as a lubricant during spinning. If the oil used is acid, for example oleic acid, a soap should be used containing sufficient free alkali, either sodium hydroxide or sodium carbonate, to neutralize this fatty acid. Simmons (8) says that the soap used for this purpose is usually made from caustic soda and olein; for lower grades, a "second curd" soap may be used; for the cheapest grades, rosin may be present. If a fatty oil has been used as a lubricant, a neutral soap is necessary, preferably a soft soap. Some special emulsions suggested contain a sodium soap from sulphonated fat or oil, and tetrachlorethane, trichlorethylene or other similar compounds.

Processing Silk

RAW silk contains about twenty-five per cent silk gum, or sericin, which is present on the surface of the fibres. The process of removing this is called "boiling off," and requires a neutral, readily soluble soap. Potash olive oil soaps are considered the best for this operation. A solution is prepared containing about 25 per cent of soap to the weight of silk to be treated.

The silk, usually in the form of hanks is suspended from rods in the soap solution in rectangular wooden vats which are heated by steam. At first the temperature is kept at about 40 degrees C., then gradually raised to about 90 or 95 degrees. The hanks are turned occasionally, but must not be moved too much, as the threads may stick together or the fibres may be ruptured. These ruptures or "flocons" are the cause of trouble later because they do not take dye properly and make light-colored patches in the silk. Boiling must also be avoided.

(1) Trotman, S. R. *The Bleaching, Dyeing and Chemical Technology of Textile Fibres* (1925).

(7) Tonn, J. F. *American Dyestuff Reporter* 13, 166.

(8) Simmons, W. H. *Wool Soaps*. *Posselt's Trade Journal*, November 1916, 106.

During the process, the sericin becomes soft, swells up, and dissolves, leaving white threads of fibroin, or true silk. After about one-half hour, the silk is removed to a second soap bath, made up in the same way as the first. After half an hour in the second bath, it is transferred to a third bath. Except for certain special silks which require unusually careful treatment, these baths can be used for successive lots of silk until the first one becomes saturated with sericin. A new one is then put in for number three, and the others moved up. The saturated solution, known as "boiled-off liquor" is used in dyeing. It assists in an even deposition of the dye on the fibre. After the silk has been removed from the third bath, it is washed with hot water, dried, and placed in canvas bags. It may be boiled for a short time with a little soap.

A number of special processes have been patented, including one in which the silk is not moved at all, and the soap solution is blown on it in the form of a spray. Silks are often "boiled off" in the form of piece goods after weaving. In this process, the goods may be passed between rollers through vats containing soap solution. It is necessary to avoid soaps with a high titer, or those possessing a strong odor. Sulfonated oil soaps have been found to give very good results.

Processing Cotton

IN THE preparation of cotton, the cleansing is usually done after the fibres have been woven into cloth. The impurities present in the cloth may include: (1) Cotton oil and wax. (2) Proteins and soluble amino acids. (3) Pectoses and pectins. (4) Natural coloring matter. (5) Oil and dirt introduced during spinning and weaving.

Not only must these be removed, but in each of the subsequent steps, it is important to wash the cloth carefully. The chief principle in the treatment of cotton is that no impurities must remain from any step in the operation which can react with the chemicals used in the next step. These steps are singeing, boiling, bleaching, scouring, and the final washing.

Cotton fibres can stand a much more strenuous treatment than silk. Consequently soaps containing free alkali may be used. Horsfall and Lawrie (6) state that soaps made from tallow and coconut oil are suitable. In the boiling of the cloth, alkali is used, either lime or soda, and rosin soaps are often added. These have a marked detergent effect, but should be avoided for fine white goods. An emulsion of sodium oleate and tetralin is said (11) to be useful in removal of fatty and waxy material

during this kier-boiling process. Because of the higher temperature, a soap with lower solubility may be used than in the case of either wool or silk.

Rayon and Rayon Mixtures

RAYON, or artificial silk, is now made by four different processes. The types are known as viscose, nitro, cupra-ammonium and acetate. The principle underlying rayon manufacture consists in the solution of cellulose (the principal constituent of cotton, wood and many other vegetable substances), and the forcing of this solution through small holes into another chemical which causes it to coagulate in the form of a thread.

The first three kinds of rayon named above are similar in the methods used to wash and dye them. Acetate silk is a cellulose ester, and behaves somewhat differently, requiring special methods of scouring, and dyeing. The dyeing of rayons, and of mixtures of rayon and other fibres will be discussed later. Before dyeing or bleaching, it is often necessary to remove sizing. This is done by a soap scouring process.

Mixtures of acetate rayon and true silk are often woven before removing the sericin from the silk. This "de-gumming" is then accomplished by a neutral soap bath, as described under "boiling off" of silk. Alkalies must be absent, or the rayon will lose its lustre. Viscose and cotton mixtures may be treated by a soap-soda ash scour. Celanese and lustron, two types of acetate rayon, are often mixed with cotton, and the following soaps are recommended (4) for: (a) For celanese, use olive oil soap and not more than two per cent. sodium carbonate. (b) For celanese and cotton, use either olive oil soap and turkey red oil, or olive oil soap and emulsified mineral oil. (c) For lustron and cotton, use 10% neutral olive oil soap and one per cent. soda ash. (d) For lustron, cotton and true silk mixtures, use a neutral olive oil soap. For acetate silk and cotton mixtures, "Monopole" soap may be used.

Use In Bleaching and Dyeing

FOR cotton bleaching, a soap is required with a high percentage of fatty acids, low free alkali, high emulsifying power for waxy and albuminous substances, and low rosin content (10). The use of hexalin or tetralin is advantageous in increasing the detergent action. Soaps have a much less harmful effect on fibres than have strong oxidizing agents used as bleaches (9). Other substances some-

- (4) Mullin, Charles E. *Acetate Silk of Its Dyes* (1927).
- (6) Horsfall and Lawrie. *Dyeing of Textile Fibres* (1927).
- (9) Hierman. *Zeitschrift für Angewandte Chemie* 36, 101 (1923).
- (10) Welwart, N. *Seifenseider Zeitung* 50, 711 (1923).
- (11) Lindner. *Chemical Abstracts* 18, 590.

times used with soap in cotton bleaching are oleic acid (commercial "red oil") and pine oil.

The dyeing of all kinds of fabrics involves the use of soap to a large extent. Only a few examples can be touched on here. In cotton dyeing, many types of dyes, including the azo colors, require special preparation of the piece goods. A naphthol "prepare" bath is often used, with a sodium or ammonium ricinoleate present. Turkey red oil is well known as a mordant, and acts as a retarding or levelling agent for applying certain colors to cotton or viscose rayon. Its dispersing properties make it excellent for the application of insoluble basic colors to acetate rayon.

In using these basic dyes it is necessary to have an "assistant." In cases where some other substance rather than soap is used as the "assistant," soap may be added as a protective colloid. In dyeing viscose, soap is the ideal "assistant," as it aids in level dyeing and minimizes friction between the fibres. A. J. Hall⁽¹²⁾ states that in viscose dyeing the presence of soap at about 95-100 degrees C. tends toward evenness. Dyeing may be started at 50 degrees, with 2.5 pounds of soap or 1.25 quart turkey-red oil in the bath.

Mullin^(*) describes the application of S.R.A. dyes (a dye of the dispersol type) to acetate silk. The dye is sold in the form of a paste. This is dumped into a boiling soap solution, and filtered into the dye baths. Green olive oil soaps are used. Insoluble dyes of the dispersol type may be dissolved in a sulfonated soap solution. After dyeing, the material is often soaped warm. This increases the lustre and brilliancy of the color. Azonine dyes are applied in a bath consisting of one part dye, three parts tetralin, four and one-half parts soap, one half part soda ash, and one hundred parts boiling water.

The dyeing of mixed fabrics is a subject with many variations and possibilities. Soap aids in producing many interesting combinations of colors. For example, in dyeing silk and cotton mixtures, soap retards the action of the dye on the silk, causing the cotton to come out darker. Black and white combinations, with an acetate silk-cotton mixture, are obtained by using sulfur dyes. After dyeing and rinsing, the material is soaped at 50-60

degrees C. in a five per cent olive oil soap solution. The cotton is black, while the silk remains white.

In cross-dyeing mixtures of acetate silk and cotton, or acetate silk and viscose, advantage is taken of the fact that vat dye will "take" on viscose and cotton, while other types of dye, for example "celatene" dyes, will dye acetate silk. After putting the material through both dye baths, it is soaped for fifteen minutes in a bath containing ten pounds of soap per 100 British gallons. This accomplishes three purposes: (a) It clears the viscose or cotton of any superficial celatene dye which may be loosely attached. (b) It clears the acetate silk of any superficial loosely attached vat dye. (c) It brightens both the colors. Sometimes dyes are too heavy or uneven. In this case the textiles are "stripped" in a soap bath, with turkey-red oil and some bleaching agent.

Sizing and Finishing

THROUGHOUT many of the processes of textiles manufacture, a "wetting out" agent is necessary, that is, a substance added to water which enables the fibres to be more thoroughly wetted. In cases where the solution is not acid, soap is used. Horsfall⁽⁶⁾ says that for this purpose, soap is the oldest and still the most efficient agent. In addition to the scouring of wool, which has already been discussed, he mentions several other important processes, including the sizing of warps, both of animal and vegetable fibres, the mercerizing of cotton, and the use with oil emulsions in spinning. This last use is applied also in the knitting of rayon materials, where it is often found that the lubrication of the threads with a soft soap-oil emulsion saves them from breaking⁽⁷⁾. Among the soaps used as lubricating agents in finishing, those made from sulfonated oils are often used.

The sizing of acetate silk after spinning is the subject of many recent patents. One method calls for the use of water-insoluble soaps of resin acids or naphthenic acids, along with a non-volatile, non-drying oil, and a resin such as gum dammar. Often another insoluble soap, such as an oleate of calcium, magnesium, zinc or aluminum is added. The size may be removed by scouring with ordinary soap. Other special uses for soap in the finishing of acetate rayon are the production of wooly effects, by using a soap solution containing free fatty acid and acetic acid, and the de-lustering of rayon by means of olive oil soap, turkey-red oil and sodium carbonate.

(Continued on Page 79)

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Family Soaps of Former Years

Raw Materials, Their Cost, and Methods of Production of Yellow Laundry Soaps Forty Years Ago

By A. J. REDPAR



EW there are today who realize the changes in processes, the advancement in the use of machinery, and the general improvement in quality of products during the past thirty or forty years in the American soap industry. Those who can remember back, appreciate the significance of the changes. For the younger generation in the soap industry, the methods and products of the past decades present an interesting comparison at the present time. Let us look back to the family soaps of 1885 and 1890, the best known and efficient soaps of the old days.

To the soap maker, the family soaps of former days were known as pure rosin soap and soda rosin soap. Both of these soaps were boiled and finished in the same manner. They were made of tallow as base material and the rosin content was figured on the amount of tallow used in the batch of soap, thus a 50% rosin soap was 1,000 pounds of rosin to a charge of 2,000 pounds of tallow. The tallow was purchased on color and titre of 43 or more and cost five or six cents. The grade of rosin was of M. to W. G., the cost of which was five to six dollars per barrel of 280 pounds gross. The same grade today is quoted at twice as much. The glycerin content was not considered, as there were very few soap factories that had glycerin plants before 1895. Most firms had discarded the cast iron fire kettles and installed sheet iron tanks and steam boilers by the last decade of the nineteenth century.

The pure rosin soap and soda rosin soap were made as follows: ten thousand pounds of prime tallow was melted into a receiving tank and was boiled with a quantity of water, two per cent of salt added while the tallow was boiling. The steam was then turned off and the tallow settled over night, the water and any dirt that the tallow had contained was drawn off. The tallow was then pumped to the soap kettle steam turned on and about one thousand pounds of lye at 12 degrees Baume was run into the tallow. As soon as saponification commenced, the strength of the lye was increased to 20 degrees Baume and gradually added during continuous boiling until

the soap was in a translucent condition and had a slight alkaline taste. Salt was then spread over the boiling soap until a "grainy" condition was noted. The steam was then turned off and the soap allowed to stand for two hours, at which time the soap and spent lye were entirely separated. The spent lye containing the glycerin from the tallow was drawn off from the kettle and *run into the sewer*. This was known as the killing change.

In the rosin change, the lye was prepared at eighteen degrees Baume for saponifying the rosin. The steam was again turned on the kettle with one thousand pounds of water and one half the rosin lye run into the soap. The five thousand pounds of rosin was broken into fine pieces and boiled into the soap, the prepared lye added as fast as the rosin was saponified. When the rosin was all melted and saponified, an alkaline taste was present. Salt was spread over the soap until the soap was again in a grained condition and a thorough separation was apparent. The steam was then turned off and the soap allowed to settle several hours or over night. The spent lye was drawn into the sewer.

For the third or strong change, steam was turned on and 2000 pounds of caustic lye at ten degrees Baume was run gradually into the kettle of soap and allowed to boil for two hours when the steam was turned off and the soap allowed to cool over night. The object of this change was to be sure of true saponification of the materials. When this lye was drawn off, it was saved to be used in saponifying the tallow in the next batch. For the fourth or settling change, the steam was again turned into the kettle and the grainy soap allowed to boil. Water was spread over the soap as it was boiling until the grain boiled into a smooth condition having the appearance of finished custard, the top rolling in, as soap boilers express it, "in roses". In this condition, the soap was allowed to boil to the top of the kettle and an alkaline taste was present. A sample taken on the trowel should run off leaving a slight film on the trowel and no free lye should drop from the trowel. The steam was then turned off and the soap allowed to

settle until a test by the thermometer showed 140 degrees F.

If the soap was to be a pure rosin soap, it was then pumped into the soap frames direct and hand crutched until the crutch would stand in the soap without tilting. Crutching to this condition gave the soap a very desirable grain when cut. This soap was never pressed into cakes, but it was cut into bars and hand stamped, as in drying the soap shrinks out of shape. If the finished batch of soap was to be soda rosin soap, the soap was pumped into a crutcher, room being left to add six per cent of sal soda. The soda was prepared by boiling 58 per cent soda ash with water in an iron tank until the solution was 35 degrees Baume while boiling, and was prepared a day before framing, as when crutched into the soap, the heat should not be over 120 degrees F. When the soda was added in the crutcher, the mixture thickened and had a smooth appearance. After crutching twenty minutes, the soap was drawn into the frame and allowed to cool until it could be cut into bars.

Early in the nineteen hundreds, some soap makers decided that silicate of soda would improve the detergent qualities of the soap and reduce the cost. Instead of drawing off the soap after the sal soda was crutched in, ten per cent of N silicate of soda was crutched into the soap. When thoroughly incorporated, the soap was drawn into the frame. This soap was not quite as thick as when drawn with the sal soda, but it had a very glossy appearance, and cut and pressed well although not quite as hard as the soap with the sal soda only.

When this batch of soap was finished on the settling change and allowed to cool, there was in the kettle, the finished soap at the top of the batch and a residue of 10 per cent to twenty per cent of what the soap maker calls niger, composed of any sediment from the base materials, albumen that may have been left in the soap, surplus alkali, salt and water. After the settled soap was pumped off, steam was turned on and the niger boiled, salt was spread in until the niger is grained. There was some free caustic in the niger lye, so a few hundred pounds of rosin was spread over the grained niger. When well boiled, a sample taken was free from caustic when tasted.

The steam was then turned off and the mass allowed to settle for two or three hours, then the free lye drawn off. This spent lye was

very dark in color and when cold was partially jellied. The jelly was not a soap but was a residue or albumen that is not a detergent. If niger soap that was left was of a good color, it was used in the next batch of soap, and tallow charged, and pumped in the batch of soap made as previously described. If a light straw colored soap was desired, the niger soap had to be pumped out and used in a cheaper grade.

This grade of soap is still made and sold all over the United States. The only difference in the making is that various grades of oils and greases are used as substitutes for the tallow base and greater care is used in the saponification of the fats through laboratory control to get full value of the soda used and the largest yield of glycerin possible in the fats and oil used.

It is not complete to leave family soaps without mention of the cheap soaps and filled soaps that were made and marketed during the twenty years from 1890 to 1910. Although the making of cheap family soaps was nearly the same process as the best rosin soaps, the materials used were greases, cheap oils and foots from cotton or corn oil, mixed with low grades of tallow. Grades of rosin from G to N were used. As the cost of rosin of this grade was from one and one-half to two cents per pound the soapmaker used often one hundred to one hundred and twenty-five pounds of rosin to one hundred pounds of fats. As a consequence, the finished soap was soft in texture in the crutcher. Three to five per cent of fifty-eight per cent soda ash was crutched in, ten to fifteen per cent of N silicate of soda and ten per cent of talcum, silex or marble flour were added to the frame of fifteen hundred pounds. For these reasons, the grocer often retailed eight to twelve ounce bars of soap for three and four cents each and oftentimes Saturday bargains included ten bars of soap for a quarter. The housewife often complained and said it required two bars of soap to do the washing where one should suffice. The real answer lay in the price which she paid for her so-called soap. The days of filled soap were trying days for the soapmaker, but they have passed into oblivion. The soap men of today vie with each other to make improved soaps of high quality, and makers of soap machinery are assisting soap manufacturers with equipment which improves and cheapens the production of all soap products.

American Chemical Society held its seventy-sixth annual meeting, Sept. 10 to 14, at Swampscott, Mass., headquarters having been at the New Ocean House.

Olive Foots As A Soap Oil

Consumption Increased Sharply Since 1922—Factors Which Determine Olive Oil Quality and Acid Content



LIVE oil has become an increasingly important soap oil in the United States during the past five years, judging from import figures of the Department of Commerce. In 1922, 8,655,000 pounds of inedible olive oil for industrial purposes was imported. This oil had an approximate value of 16.6c per pound. In 1927, the amount imported had increased to 49,126,000 pounds with a value of 9.7c per pound. For the first half of 1928, the imports were 25,286,000 pounds with a value of 8.6c per pound. As the price per pound of oil imported would indicate, the greatest increase has been in olive oil foots rather than what is ordinarily termed commercial olive oil.

The increased consumption of olive oil foots in the United States is laid to the expansion in the manufacture and use of olive oil soaps in the textile industry on silk and wool. Where larger imports of commercial olive oil, that is denatured oil or expressed oil imported in bond for industrial purposes, are noted, they are probably due to larger use for textile operations, chiefly in woolen plants.

Olive oil as is commonly known is made by grinding nearly ripe olive pulp and pressing out the oil. For cheaper grades of oil, the entire olive, pits and all, are ground and pressed. Three pressings are given, the first being known as virgin oil, and each pressing thereafter giving a lower grade of oil. The press cake which contains some 10 or 12 per cent of oil remaining, is then extracted with volatile solvent, usually carbon disulfide which is recovered and used over and over. This latter solvent which is ill-smelling with a hydrogen sulfide-like odor is what gives the name to olive oil foots so commonly used, sulfur olive oil. Damaged olives, injured both in picking and in storage through too long storage or at too high a temperature or without proper ventilation, are also worked in this manner with a volatile solvent. Although the sulfur oil or extracted oil is commonly called olive oil foots in commerce in the United States, the true foots of olive oil are the settlings, or mixed solid foreign matter and oil, drawn from the bottom of the tanks in which the refined or pressed olive oils are stored. Foots is the name given the residues or settlings of any fatty oil, but in the case of olive foots, the extracted oil is

what is meant in the parlance of the trade.

The quality of olive oil is determined to a great degree for commercial oils by the free fatty acid content. In a high grade edible oil, the acid content is usually one per cent or under, although some oils up to three and four per cent are used for edible purposes. For a good commercial olive oil, that is one which is suitable for textile softening, a top limit of five per cent free fatty acid is usually made, most of the oils running well under this figure. A higher acid content attacks the machinery of the mills. For a commercial oil, either denatured or imported in bond, the acid content is not so important where the oil is to be used in soap manufacture. The free fatty acids of olive oil foots run anywhere from 25 to 75 per cent and this high acid content makes the oil suitable for little else but soap manufacture.

The quality of the olives from which any oil is made determines to a great extent the acid content of the oil. The fresher the fruit, the lower the acid content of the oil. Where the olives are stored at a high temperature without ventilation, enzyme activity takes place with increasing rapidity which means breaking down the glycerides of the oil and forming fatty acids. The longer the olives or press cake are stored, the greater time is there for the formation of higher percentages of fatty acids. Likewise, the green color of olive oil foots which is due to the presence of chlorophyll, is also changed to a brown where the press cake is stored too long, due to oxidation of the chlorophyll.

Imports of olive oil, that is, foots and inedible oil, during the past years into the United States, are shown in the following figures from the Department of Commerce. The quantities furnished by Italy and Spain are noted. The balance of the totals were shipped from Greece, France, Turkey, Portugal, Northern Africa, and near-by islands.

Imports by the United States

	Italy	Spain	Total
1922 (In tons).....	10,240	550	13,400
1923	12,900	5,700	20,300
1924	11,120	2,000	16,000
1925	18,500	2,200	25,800
1926	10,800	12,000	25,100
1927	21,000	1,600	24,600

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New York Oil Trades Golfers at Annual Meet

OIL TRADES ASSOCIATION of New York held its annual golf tournament, Sept. 27, at the Westchester Hills Golf Club, near White Plains, N. Y. It was the sixth annual tournament for golfing members of the organization and was attended by a record number of members and guests. A perfect day greeted the golfers, most of whom were on hand early and played 36 holes. The course, which has been used annually during recent years, through the courtesy of Joseph Pigot, former president of the organization, afforded a good test of golf.

The championship cup, emblematic of the oil trades championship, together with first choice of the many prizes, went to J. H. Redding, head of the Niger Co., who scored a net 69. In winning the cup, Mr. Redding did something no other vegetable oil trades man had been able to do, it having been taken away by the mineral oil contingent during each of the three previous years it has been in play. Incidentally, the acquisition of the oil trades cup gives the Niger Co. a second association golf championship, J. H. King having already won the cocoa trade cup. Low gross prize went to W. P. Hopkins, National Rosin, Oil & Size Co., with a 76. This score was equaled by a guest,

F. T. Hoyt, who won low gross guest prize. Low net Class A prizes went to J. F. Gill, J. F. Gill Petroleum Co., net 71, George Wharry, G. A. Wharry & Co., net 72, and H. D. Carter, Oil Trading Co., net 72. Class B low net honors were taken by F. J. Coffin, Sun Oil Co., net 70, Al. C. Hornburger, American Agricultural Chemical Co., net 70, W. F. Nevins, Standard Oil Co. of N. J., net 73, and W. A. Chambers, G. L. P. Chambers & Co., net 75. Guest low net prizes were won by Mr. MacNett, Tide Water Oil Co., net 71, and J. D. Bennett, Bennett-Dexter Petroleum Co., net 73. The title of "Honest Golfer" was conferred on G. P. Smith, F. W. Steadman Co., who came in with a score of 144. Although the vegetable oil contingent was beaten out by the mineral oil crowd, numerically, in prize winners, with the main competition safely stowed away by J. H. Redding golf supremacy has been favorably decided for the ensuing year.

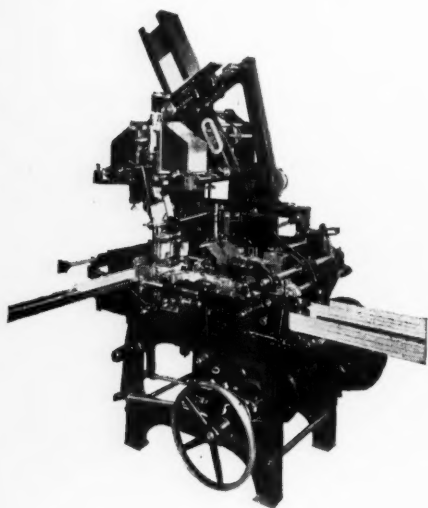
The tournament was ably handled by the committee composed of Clifford T. Weihman, Smith-Weihman Oil Co., chairman, and George A. Wharry, Edwin Stern, Howard Sherrill, Joseph N. Pigot, R. E. E. Hood, Phil. C. Meon, T. J. Skidmore and Joseph C. Smith.



Some of the Oil Trades "Gang" who attended the Annual Golf Party at Westchester Hills on Sept. 27.

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Report on Cotton Oil Conference

THE Federal Trade Commission has issued an approved report under date of Oct. 8, covering the recent trade practice conference at Memphis, Tenn., for the cottonseed oil mills industry. Commissioners Humphrey and Ferguson dissented in the approval of the report by the Commission. Thirteen resolutions or regulations were adopted by the cottonseed oil producers at the trade practice conference, five of which were affirmatively approved by the Commission and eight were recorded as expressions of the trade. The rules approved by the Commission have to do with discrimination in prices paid for cottonseed and the prices charged for the products of cottonseed as well as the matter of accurate branding of these products.

It was declared to be unfair competition to discriminate in the prices paid to different sellers of cottonseed or the prices charged for the products thereof, when the effect of such discrimination may be to lessen substantially competition or tend to create a monopoly. It was resolved that each mill publish prices paid for cottonseed and prices received for the products thereof, and that the reporting of false or fictitious prices, or the failure to report the exact price paid for cottonseed, or price received for the products thereof, is unfair competition. Unfair competition in the form of commercial bribery was condemned.

The rules accepted as expressions of the trade concerned contracts for the purchase of cottonseed for a specified tonnage at a specified price, predated contracts, and other policies regarding the buying and selling of cottonseed. It was recommended also that in order to conform to the principles of these rules, a uniform practice contract and account sales form should be used in all transactions. Rule No. 7, accepted as an expression of the trade, provides that "any contract post-dated or predated, or entered into without authorization and definite commitment at the time it is made by both parties thereto, is an unfair method of competition." It was directed by the commission that the following notation be attached to Rule No. 7: "This rule is construed by the commission to condemn pre-dating of contracts for purchase of seed or sale of products except to conform to a bona fide agreement for purchase or sale on the pre-date. To that extent and with that interpretation the rule is accepted by the commission as an expression of the industry."

Approximately ninety-five per cent of the cottonseed oil production of the country was represented at the trade meeting, which was

held July 24 at Memphis, Tenn., and presided over by Federal Trade Commissioner, Edgar A. McCulloch, assisted by M. Markham Flannery, Director of Trade Practice Conferences. George H. Bennett of Dallas, Tex., acted as secretary of the conference. A complete list of those who attended the conference and the firms which they represented, has been issued by the Commission. Copies of the resolutions in full as adopted by the conference are available from the Federal Trade Commission, Washington, D. C.

American Oil Chemists Meet Oct. 25

The American Oil Chemists' Society will hold its annual fall meeting in New York City on October 25 and 26. Headquarters will be established at the Hotel McAlpin, although the sessions on the first day of the meeting will be held in the Board of Governors Room of the New York Produce Exchange, Broadway and Beaver Street. On the second day of the meeting, Oct. 26, the sessions will be held at the Hotel McAlpin. During the meeting, a Soap and Soap-By-Products Section of the Society will be organized. Invitations have been sent to a number of chemists in the soap industry to attend, and the meeting will be addressed by several speakers on technical subjects of particular interest to the soap chemist. A. W. Putland, president of the Society, will preside at the New York meeting.

Manhattan Sues on Soap Wrappers

Manhattan Soap Co., Bristol, Pa., a New York corporation has filed suit in the New York Supreme Court against the Hamersley Manufacturing Co., Garfield, N. J. for damages incurred when the ink on certain soap wrappers supplied by the defendant worked through the wrapper and discolored large quantities of soap. The plaintiff states in its complaint that the paper company supplied the wrappers printed for use especially on soap, that quantities of soap were shipped to all parts of the United States, that the soap was rendered unfit for use and that the soap had to be gathered together and returned to the plant of the plaintiff for remelting and rewrapping. The soap in question is reported used chiefly for washing white goods and caused much staining and consumer complaints, the plaintiff states. The soap company holds that it ordered wrappers printed with a specified non-bleeding ink and that the company in shipping wrappers printed in other ink was negligent and caused damages to the soap firm.

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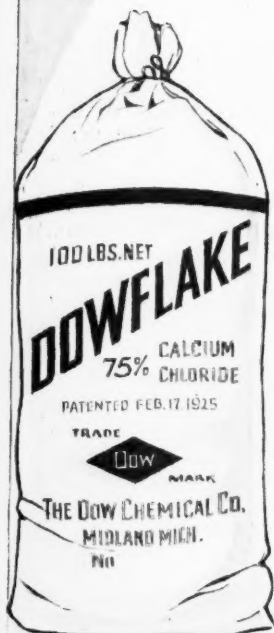
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First Palm Oil Tanker Sinks

When 3,000 tons of palm oil, destined for the Niger Co., Inc., New York, were lost with the running aground and subsequent sinking of the tanker *Gustav Schindler*, late in August, off the coast of West Africa, the newest of palm oil shipping services started inauspiciously. The *Gustav Schindler* was the first tanker ever to be used for the purpose of carrying palm oil, shipment having previously been made only in barrels, casks and drums or in the deep tanks of steamers. The Niger Co. had made very careful preparations for the new method of handling palm oil from the producing regions to the world's markets and, aside from the loss occasioned by the accident, had to see many weeks of careful planning go for naught. When definite reports of the incident were received there appeared to be no reason for doubting that tankers would not be tried again in the future as the ship was run aground when the captain mistook the direction buoy for the turning buoy. After the tanker had run aground, hurried, but ill-advised, efforts to refloat her resulted in pulling the ship into deep water where she sank immediately, the strain having opened the ship too greatly.

Company Profits Up One Third

Eight companies manufacturing liquid soaps, disinfectants, tooth soaps, and other toilet articles showed an increase in net incomes for the first half of 1928 of approximately one-third over the figures for the corresponding figures of 1927. The total figures for the eight firms were \$7,691,096 for the half of 1928 and \$5,779,980 for 1927, an average increase of 33.07 per cent. The companies and their net profits were as follows:

	1928	1927
Bristol-Myers	\$ 685,694	\$ 477,295
Coty, Inc.	1,499,552	1,055,721
Forhan	542,627	305,027
Household Products	1,519,246	1,519,022
Lambert	2,111,540	1,620,114
Lehn & Fink	1,052,326	650,564
Vaness Laboratories	113,404	28,392
Woodworth, Inc.	166,707	122,815

Eight manufacturers of metal caps and automatic capping machinery have been merged under the title Anchor Cap Corp., with main offices in Long Island City, N. Y. The companies involved are the Anchor Cap & Closure Corporation, the Anchor Cap & Closure Corporation of Canada, Ltd., the Capstan Glass Company, the Paragon Can & Cap Company, the Sure Seal Company, Inc., the Beacon Machinery Corporation, the Automatic Screw Capping Machine Corporation and the Pilgrim Auto Supply Corporation.

Arrested for Babbitt Label Fraud

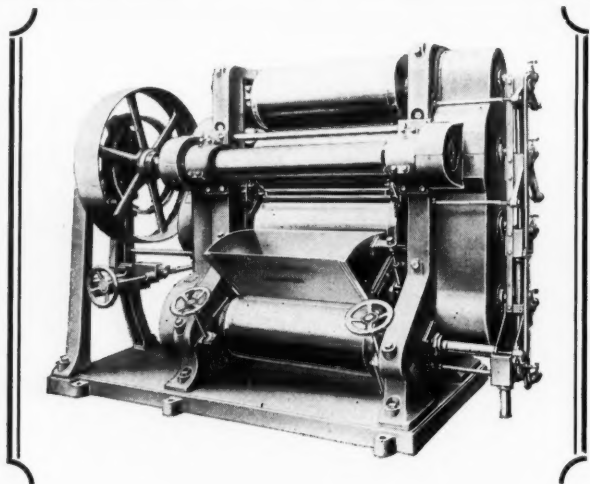
Switching labels from a high price cleaning compound to containers of a cheap scouring powder and selling the latter at a supposedly cut price was recently discovered by B. T. Babbitt, Inc. in New York. The use of counterfeit labels on packages of supposed Bab-O, a product of Babbitt, was exposed by Alan Mendleson, treasurer of the company, and came to light recently when a summons for the arrest of Abe Rotto, a grocery jobbing house salesman, was issued in the Flatbush Court, Brooklyn, N. Y.

The product alleged sold by Rotto was in reality one of the cheaper scouring powders of the Babbitt company bearing a counterfeit Bab-O label on which the abbreviation, "Inc.," following the name, B. T. Babbitt, was omitted. This omission led to a discovery of the fraud, an investigation having been instituted following a number of complaints from Brooklyn housewives regarding the quality of the supposed Bab-O. Bab-O retails for fifteen cents per package, while the powder which was sold for Bab-O was in reality a product retailing for five cents. The salesman is reported to have bought the scouring powder from B. T. Babbitt, Inc., putting on false Bab-O labels, underselling the Babbitt concern, and at the same time, making a profit of two hundred per cent.

Soap Dust Highly Explosive

Increased manufacture of soap powders and flakes has led to a new industrial hazard according to the Bureau of Mines. Tests made at the Pittsburgh Experiment Station of the Bureau have shown that certain types of soap-dusts when suspended in the air are more violently explosive than many dusts encountered in industry. The well known "cooling" effect of sodium compounds on the flames of explosives and the "semi-organic" nature of the compound, soap, might lead one to expect soap dust suspensions to be relatively non-explosible. Soap-dust suspensions in air are, however, easily ignited and produce violent explosions accompanied by much flame and large quantities of heat, the Bureau of Mines states.

Several New York firms, which could trace their businesses back 100 years, recently met for the purpose of forming a Hundred Year Club. Among the companies represented at the meeting were Dodge & Olcott Co., McKesson & Robbins, Oakley & Co., and Louis K. Siggett Co.



for the milling of
TOILET SOAP
or transparent diamond shaped high gloss
SOAP FLAKES

the No. 312 MRS Five Roller Toilet Soap Mill

with 16" x 40" Chilled Iron Rolls all watercooled and equipped with self-aligning roller bearings which are guaranteed grease and dust proof and most economical in power consumption.

The "LEHMANN" Line of Soap Mills in various sizes up to 22" dia. and 48" length of rolls and designed for every conceivable need, is unsurpassed in construction and workmanship and represents the most up-to-date equipment on the market.

Soap Film from 2/1000 up to 8/1000 of an inch in thickness. Hardest chilled iron rolls obtainable, guaranteed machined inside to uniform thickness of shell. Roll shafts and bearings stronger than those of any other machine on the market.

For full information write to—

J. M. LEHMANN COMPANY, INC.

248-250 WEST BROADWAY

NEW YORK CITY

Se solicita correspondencia en Español

Say you saw it in SOAP!

Opportunities for Export

The following opportunities for export of American soaps and allied products have come to the Bureau of Foreign and Domestic Commerce, Washington, D. C. American manufacturers can secure the full details of the inquiries by communicating with the Bureau, care of the Department of Commerce. Be sure to mention the number of the Foreign Trade Opportunity in writing.

33,465	Cleaning Compound for Glass	Sweden	Agency
33,171	Shaving soaps	Egypt	Purchase
33,172	Tooth soap	Belgium	Agency
32,601	Disinfectants	Brazil	Agency
32,602	Sheep dips	Poland	Agency
32,861	Tooth soaps	Sumatra	Agency
32,946	Insecticides	Switzerland	Agency
32,946	Cleaning Compounds	Switzerland	Agency
32,848	Soap Chemicals	Cuba	Agency
32,705	Toilet soaps	India	Agency
32,712	Soaps	Holland	Agency
33,332	Soaps	Dom. Rep.	Agency

Expects Short Bergamot Crop

An expectation of a bergamot crop some thirty per cent short of the last crop has been expressed after a recent inspection of the Calabrian situation, by Dr. Adolph Sarauw, director of Ferd. Baller & Co., Messina essence producers, to a representative of SOAP. Although the crop will be short, the carry-over from previous production will be slightly above normal, owing to a somewhat lessened demand during the past year. With the big Calabrian estate owners strongly financed, and the fact that bergamot keeps well, he believes that there is little likelihood of the price going down, as they will not sell until they get their price. Bergamot of standard brand is held today at about \$4.70 for shipment and Dr. Sarauw sees little reason for lower prices. Dr. Sarauw arrived in New York on October 1 and is making his headquarters with Charles L. Huisking & Co., American agents for his firm. He will stay in the United States about a month, during which he will visit various eastern and mid-western cities, and Canada.

Mid-Continent Laundries, Inc., a merger formed by nineteen laundries and dry cleaning companies, located in Chicago, Sioux City, Council Bluffs, and other mid-western cities, has been effected by a New York banking syndicate.

Recent new soap company incorporations include the United States Soap Co., Cincinnati, O., Republic Soap Corp., New York, by Konta, Kirchway & Engle, 7 E. 44th St., and Slite-O-Hand Mfg. Co., Sallan Bldg., Detroit.

Redding Named Director Niger, Ltd.

J. H. Redding, director of the Niger Co.'s American activities since 1916, when the company was formed in this country, has been elected a director of the Niger Co., Ltd., this marking the first time that a foreign director has been elected to the board in the firm's eighty years of existence. Mr. Redding joined the Niger Co., Ltd., in 1915, having had a background of several years' experience with West African trading companies, election as a director of the parent organization having come as a special notice of his services in connection with building the American subsidiary. The Niger Co., Ltd. is one of the oldest West African trading houses, having held a charter from the British Government, from 1886 through 1899, which allowed it to govern the entire territory of Nigeria. The firm was then known as the Royal Niger Co.



J. H. REDDING

building the American subsidiary. The Niger Co., Ltd. is one of the oldest West African trading houses, having held a charter from the British Government, from 1886 through 1899, which allowed it to govern the entire territory of Nigeria. The firm was then known as the Royal Niger Co.

A booklet for school use, "The Animal Way" by Jean Broadhurst, illustrated by Dorothy Double, has been issued by the School Department of Cleanliness Institute. The book is made up of 64 pages of rhymes and colored pictures of animals with colored cut-outs for pasting in, describing the various manner in which animals and birds keep themselves clean.

National Oil Products Co., Harrison, N. J., has recently issued a booklet on the softening and lubricating of rayon. The pamphlet contains the result of research by the company's chief chemist, Charles I. Post, and George F. Ecker, Jr., silk expert.

R. H. Macy & Co., New York, have discontinued all demonstrators in their toilet goods department, reputed to be the largest retail outlet of its kind in the country and doing a business of two and a half million annually. Demonstrators acting for various manufacturers and paid by them, have been the chief sales force at Macy's department. The use of demonstrators was reported to have been found to lead to violations of the sales policies of the store, and detrimental to the best interests of the store.

See what
we mean by
good values in
perfume oils.

A. L. VAN AMERINGEN

*Essential Oils, Synthetic Chemicals,
Natural and Synthetic Flower Oils*

30 IRVING PLACE, NEW YORK

180 N. WACKER DRIVE, CHICAGO

Manufacturing Laboratory

451 S. JEFFERSON STREET

ORANGE, N. J.

FOR SPRAYS,
DISINFECTANTS,
GERMICIDES,
CLEANING
PREPARATIONS,
DEODORIZING
BLOCKS, etc.

FOR SOAPS,
LIQUID SOAPS,
DENTIFRICES,
SHAMPOOS, etc.



		per lb.
Oriental	S249½	\$3.50
Rose	S342	3.25
Bouquet	S522	2.50
Carnation	S610	3.75
Narcissus	S612	3.50
Rose	S675	3.00
Carnation	S709	2.25
Bouquet	T19	2.25
Pine	T50	2.50
Jasmin	T77	3.75
Syringa	T103	5.00
Muguet	T146	4.00
Para Oil	T179	2.50
Arbutus	T185	4.00
Bouquet	T212	1.90
Colonia	T250	4.00
Locust	T254	4.00
Muguet	T264	2.00
Lilac	T270	3.00
Lilac	T274	1.90
Bouquet	T280	2.00
Bouquet	T296	2.25

		per lb.
Lily	S154	\$4.00
Rose	S245	3.75
Pine	S275	3.00
Carnation	S284	5.00
Heliotrope	S500	4.50
Sassafras	S575	2.00
Bouquet	S662	4.50
Shampoo Bouquet	S680	10.00
Mint Shampoo	S695	9.50
Amber	T48	5.00
Bouquet LX	T54	4.50
Alva Soap		
Bouquet	T71	8.50
Tooth Paste Oil	T92	6.00
Tooth Paste Oil	T122	7.50
Sweet Pea	T148	6.00
Violet	T160	6.00
Chypre	T163	6.00
Lavender	T168	5.50
Lemon Verbena	T169	4.00

Check

this list and send for samples of those that interest you. We have dozens of other oils, for all purposes. State what preparation you want to perfume, and how much you can afford to spend to perfume it.

Remember the Van Ameringen Policy: Make your own tests with our samples. See in what respects the van Ameringen ingredients have improved your products. We'll abide by the result.

Say you saw it in SOAP!

Editor's Correspondence

Soap Calculations

Editor, SOAP:

Reviewing Mr. Schotte's figures in his article "What Profit in Toilet Soap?" in the September issue of SOAP. Starting with a fat charge of 40,000 pounds, Mr. Schotte has a yield of 58,800 lbs. kettle soap, after allowing 2% for losses due to impurities in the fat and those incidental to manufacture, the soap having a moisture content of 33%.

If then, to this moisture content, we add another 1% to represent free alkali, salt glycerin, etc. left in the soap, then 66% of the 58,800 lbs. would represent the anhydrous soap present or 38,808 lbs. and this divided by 1.0316 should give the original fat charge less 768 lbs. (This is the 1200 lbs. soap reckoned to fat on the above basis.) which was allowed for manufacturing losses, etc.

But does it do this: $\frac{38808}{1.0316} = 37,619$ lbs. and if to this we add the 768 lbs. deducted for losses, we still have only 38,387 lbs. of the original fat accounted for, leaving 1,613 lbs. fat unaccounted for, representing in soap on the above basis 2,520 lbs. or roughly speaking 4%.

The allowance of 768 lbs. fat or 1,200 lbs. soap, which Mr. Schotte makes for manufacturing losses is quite ample for the stock that would be used in a toilet soap base. Why then the 4% additional loss?

Now the extraordinary feature of Mr. Schotte's figures, and that to which I desire to draw attention, is that they represent quite average practice. Perhaps 70% or over of open kettle, settled soap, produced would show a kettle yield in or around the figures Mr. Schotte gives and therefore are the only figures that could be taken for cost purposes.

When analyzed, however, they show clearly the need for a thorough review of present day methods and furnish another very strong reason why the soap trade should have a technical association.

I have been hammering at this subject of soap yields, in season and out of season, for over sixteen years.

Yours truly,
GEORGE S. TATE

Lawrence, Mass.
October 2, 1928.

Laundry Owners Meet in Boston

The Laundryowners National Association is holding its annual convention in Boston, October 15 to 19 inclusive. Headquarters of the convention are located at the Hotel Statler. The usual extensive exhibition of laundry materials and equipment is being held at Boston Mechanics' Hall. Over a hundred firms are displaying their products in the exhibits. A number of soap and alkali firms are represented this year. Among them, are included the following: Colgate-Palmolive-Peet Co.; John T.

Stanley Co.; Oakite Products Inc.; H. Kohnstamm & Co.; Swift & Co.; Mitchell Wing Co.; Armour & Co.; J. B. Ford Co.; Lever Brothers Co.; Davies-Young Soap Co.; Alden Speare's Sons Co.; Solvay Sales Corp.; Sunshine Soda Co.; Procter & Gamble Distributing Co.; Mathieson Alkali Works.

Soap Imports Continue High

Toilet soap imports reached 151,181 pounds, valued at \$39,772, in July, fifty per cent. above the July, 1927, figure, continuing the increasing tendency noted throughout the current year. The July imports were about 10,000 pounds below the average monthly receipts for the first seven months of this year, however. Castile soap imports reached 380,715 pounds, in July, also considerable above the July, 1927, receipts of 312,218 pounds. Imports of all other soap amounted to 163,263 pounds, worth \$15,376, about three times as large as were imports in the same month a year ago.

British Soap Exports Average

British soap manufacturers exported 139,385 cwts., of soap, in July, the goods having been valued at £322,311. This practically equals the monthly average for the first seven months of this year, exports during the period having totaled 996,141 cwts., valued at £2,297,950. Imports, in July, only amounted to 19,130 cwts., valued at £45,784, somewhat below the monthly average for the seven month period, which saw a total of 173,667 cwts. of soap come into the country. Most of the exported soap consisted of hard bar soap, other than toilet, shaving and abrasive, this group having accounted for 122,636 cwts. of the shipments. Toilet soap exports totaled only 5,865 cwts., below the import total in the same month, 6,119 cwts. The value of the imported toilet soap was also above that of the exported material, contrary to previous experience, £72,905 as compared with £50,117.



SAPOFIXIN

We invite you to try our Sapofixins
in your Soaps as reinforcers.

Sapofixin Eau de Cologne

Sapofixin Hyacinth

Sapofixin Lavender

Sapofixin Lilac

Sapofixin Lily of the Valley

Sapofixin Orange

Sapofixin Pine

Sapofixin Rose

Sapofixin Violet



HEINE & CO. NEW YORK

TELEPHONE BEEKMAN 1535

52-54 CLIFF STREET

Sole Distributors for HEINE & Co., A. G., Leipzig
in the United States and Canada

PERSONAL and IMPERSONAL

Charles W. Conover, perfumer for Andrew Jergens Co., Cincinnati, one of this country's oldest perfumers, died early last month. Mr. Conover had been connected with the Jergens company since 1896, when he joined the organization as a part of Eastman & Bros. Co., Philadelphia, taken over by the Cincinnati concern at that time.

F. P. Brown, for the past five years superintendent and purchasing agent for the Harris Soap Co., Buffalo, N. Y., has left the employ of the Buffalo concern and is enjoying an indefinite vacation. He is located at 1657 Richmond Rd., Staten Island, N. Y.

Henry Walters, a belt repair man in the Port Ivory, Staten Island, New York, factory of Procter & Gamble Co. was elected a director of the company on Sept. 20 by his fellow employes in accordance with the P & G established policy of having their employes represented on the board of the company. Mr. Walters is 46 years old and has been employed at the Port Ivory plant for 22 years.

J. T. Robertson Co., Syracuse, N. Y., recently reorganized following the purchase of the Bonded Products Co., Brooklyn, announce the election of G. R. Fulton as vice president. Mr. Fulton was with Lever Bros. from 1917 through 1924, when he became associated with the Kendall Mfg. Co., Providence, makers of "Soapine."

Charles A. Meyer, president of the Los Angeles Soap Co., issued the following statement which was published in the September issue of the company magazine, *Soap Suds*: "In order to clarify rumors pertaining to the sale, consolidation, or merging of the Los Angeles Soap Company to, or with other Companies, please be advised that many such propositions have been submitted to your Company from time to time. Each and every proposition submitted has been laid before the Board of Directors of your Company and given due consideration in order to protect the interests of the Stockholders and your-

selves. Your Board of Directors have definitely decided against any sale, consolidation, or merging for the time being, as such propositions were not, in their estimation, beneficial to the Stockholders of the Company or to yourselves as employees."

W. G. Fraser, president of the Beaver Soap & Chemical Co., Winnipeg, Man., recently returned from a trip to Europe.

Reports to the effect that T. G. Cooper & Co., Philadelphia oil and chemical house, was contemplating discontinuing business have been emphatically denied by Otto A. H. Hagen, vice president and general manager of the company. Mr. Hagen states that, on the other hand, the firm has recently added many new lines, with the expectation of materially increasing its activity from now on.

James S. Kirk & Co., Chicago, have appointed the Quinlan Co. to direct a test newspaper advertising campaign on Jap Rose Soap. The test advertising will be centered in six cities.

Bristol-Myers Co., New York, recently placed through private sale through J. & W. Seligman & Co., New York, 20,000 shares of common stock of no par value. The proceeds were used to reimburse the company in part for expenditures made in connection with the purchase of the entire capital stock of Frederick F. Ingram Co., manufacturers of toilet articles, which firm was recently acquired by Bristol-Myers.

Los Angeles Soap Co. recently established a sales and distribution center for its products in Alaska with the Ketchikan Mercantile Co. Marks Finks of Los Angeles Soap made the new connection on a recent trip to Alaska.

Allen B. Wrisley Co., which recently moved into a new factory at Clearing, near Chicago, has increased its capital stock from \$500,000 to \$750,000.

ONLY THE FINEST QUALITY

*That is Bertrand Freres Policy on
all products sold under their label.*

Every soap manufacturer should become acquainted
with the following B. F. oils—

OIL GERANIUM

OIL VETIVERT BOURBON

OIL VETIVERT JAVA

OIL PATCHOULY

OIL THYME

OIL ROSEMARY

OIL LAVENDER FLOWERS

OIL LAVENDER SPIKE

Two new B. F. Specialties

RESIN PATCHOULY

RESIN VETIVERT

*Combining the perfume value of the oil
with the fixative properties of the resin.*

OIL BERGAMOT VILARDI OIL LEMON

Our principal Paolo Vilardi is located in the heart of
the producing regions. Every can of Lemon or Ber-
gamot offered by Vilardi is sealed by chemists of the
Italian Government. This is your guarantee of purity.

Let us submit quotations.

Sole Representative of

Bertrand Freres, S. A.

GRASSE

FRANCE



P. R. DREYER INC.

26 CLIFF STREET

NEW YORK

Sole Selling Agent for

VANILLIN FABRIK
Hamburg, Germany
Aromatic Chemicals

**NORD AFRICAN
COMMERCIAL**
Alger, Africa
Oil Geranium

H. RAAB & CO.
Roermond, Holland
Artificial Musks

PAOLO VILARDI
Reggio Calabria, Italy
Messina Essences

Say you saw it in SOAP!

Enoch Morgan's Sons Co., New York, manufacturers of "Sapolio," and Ferd Mulhens, Inc., New York, importers and manufacturers of toilet goods, were recently elected members of the Merchants' Association of New York.

Alfred J. Krank, president of the A. J. Krank Manufacturing Co., St. Paul, Minn., manufacturers of toilet goods and soap products, was killed on Sept. 26 when his automobile was in a collision with a street car near Excelsior, Minn.

Pal Products Co., Brooklyn, N. Y., manufacturers of polishes, have just put on the market a porcelain cleanser under the name of Palo, and a new trisodium phosphate dish washing compound.

Drackett Chemical Co., Cincinnati, has complained to the Interstate Commerce Commission regarding freight rates on one of its products for cleaning drain pipes. The firm claims that the railroads have a higher classification for drain pipe cleaners than for cleaning, scouring and washing powders.

Los Angeles Soap Co., Los Angeles, has appointed Heinz & Robertson Advertising Agency, Los Angeles, to handle its advertising account.

A new cleanser will shortly be placed on the market by the American Coffee Co., 928 W. Polk St., Chicago.

Henkel & Co., Dusseldorf, Germany, a leading factor in Germany's soap and glycerin trade, has increased its capital from 10,000,000 to 24,000,000 marks.

United Soap & Chemical Products Corp., Newark, N. J., has been recently organized by Herman B. Weckstein, 164 Market St. The Company, which is capitalized at \$100,000, plans to build a factory for the production of soaps, chemicals and related products.

Tunley & Co., who recently moved to 12 Water St., New York, where they could secure warehouse space not available at their former Produce Exchange location, have discontinued to represent various oil and fat producers and have adopted a strict dealer policy. The firm is now carrying complete stocks of vegetable oils, fats, etc., at the above address, being prepared to sell in any quantity. A. H. Aubertin continues as manager of the business.

Gold Dust Corp., New York, has applied for the listing of 275,105 additional voting trust certificates on the New York Stock Exchange, making a total of 600,105 listed shares. Present stockholders are being offered the new stock on a basis of one share, at eighty dollars, for each two shares now held.

New York Wholesale Drug Trade Bowling Association started its 1928-29 season Oct. 15 on Colgate's alleys, Jersey City. The team representing Colgate & Co. won the league championship last season.

Van Camp Packing Co.'s, Louisville, Ky., soap plant was slightly damaged by fire last month. Machinery and equipment felt most of the damage.

The Chicago Perfumery Soap and Extract Association started its Fall season with a luncheon, Sept. 19, at the Hamilton Club. With the recent acquisition of the Norda Essential Oil and Chemical Co., as a member, the organization's membership list reached 100.

Displays of soaps, tooth soaps, household insecticides, and allied products at the 30th annual convention of the National Association of Retail Druggists, held at the Whitcomb Hotel, San Francisco, from Sept. 10 to 14, included those of Colgate & Co.; Plough Chemical Co.; E. R. Squibb & Sons; J. B. Williams Co.; Kolynos Company; Pepsodent Company; Armand Company; Lambert Pharmacal Co.

The new McKesson & Robbins, Inc., New York and Bridgeport, Conn., formed by a merger of McKesson & Robbins and some fifteen wholesale drug houses throughout the United States, and capitalized at \$100,000,000, will act as a supply depot for 50,000 independent retail druggists and other retailers who handle medicinal products, toilet goods, etc. In its new form, McK. & R. will be the largest single purchaser of drug store products in the world. Purchasing will be handled from 79 Cliff St., New York.

New York Produce Exchange Golf Club held its annual tournament, Sept. 20, at the Wheatley Hills Golf Club, East Williston, L. I.

Soap Perfume Oils

Produced by

ROURE-BERTRAND FILS

LARAGNE (FRANCE) GRASSE BOUFARIK (ALGERIA)

Geranium African

Geranium Bourbon

Lavender Fleurs

Vetivert Bourbon

Petit Grain, South American

Ylang Ylang Bourbon

Ylang Ylang Nossi Be

As sole agents, in the U. S. and Canada, for Roure-Bertrand Fils, long a primary source of supply for these highly important Soap Perfume Oils, we invite comparison of these oils with those you are now using.

GEORGE SILVER IMPORT CO.

461-463 FOURTH AVENUE
NEW YORK CITY

Say you saw it in SOAP!

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ON PRODUCTS AND PROCESSES

Where a soap contains no non-drying fats, such as in the case of Marseilles curd soaps, the calculation of hardness and solubility from the difference of the saponification value and iodine number (Webb, INS factor.) is inaccurate. A study of fat composition and its relation to the permanation coefficient is needed for more exact data. — *Seifensieder Zeitung*, 55, 85, 1928.

Causes of yellow spots in soaps are due to (1) lavender oil as perfume, (2) use of hydrogenated fats or cottonseed oil, (3) too sudden chilling in cooling process, (4) traces of heavy metals such as copper salts, iron salts, etc. (5) incomplete saponification, according to a recent review of the subject by Davidsohn, which are overcome by special cold saponification. — *Chem. Umschau Fette, Oele, Wachse u. Harze*, 166, 35, 1928.

A test which forecasts the keeping qualities of a fat or oil, that is its resistance to rancidity, is as follows: one gram of fat and 1 cc. of 25% methylene blue solution are emulsified in 10cc. 50% diluted separated milk and the blue color is allowed to be bleached by the reductose of the milk by incubating at 37 to 40 deg. C. After bleaching, the contents of the tube are well shaken and the depth of the blue color is noted. The test was carried out with a large number of fats of known history and keeping qualities, and the depth of the blue formed corresponded accurately with the ease of oxidation of the fats. The test is useful in detecting metallic contamination of fats. Further as a test for the state of oxidation in individual fats, this method was found more suitable than the Kreis test and less cumbersome than determining the oxidizability values of the steam volatile and water soluble constituents. — *Jour. Society Chemical Industry*, 47, 185, 1928.

A dry, non-caking and readily soluble soap in the form of threads is manufactured by forcing a pure curd soap through nozzles with a maximum diameter of 1.5 mm. — Canadian Patent No. 282,112.

Hard soaps made with potash and grained with potassium acetate instead of salt, are claimed to have a superior deterative power. However, on exposure to air, they absorb moisture, swell and become soft. In twelve days a tallow and olive oil soap became fluid. — *British Soap Manufacturer*, 166, June, 1928.

A detergent consists of a mixture of an alkali bicarbonate and small amounts of alkali carbonates with turpentine. As an example, a mixture of 250 grams of sodium bicarbonate, 20 grams of a 30% potassium carbonate solution and 60 grams of turpentine are used for a clothes laundering mixture. — Austrian Patent No. 109, 387.

Hydroxycitronellal is not suitable for lilac, jasmin, lily, and other floral effects in soaps, because it decomposes rapidly to form a rancid, oily odor. This can be prevented to some extent by mixing methyl anthranilate in equal quantity with the hydroxycitronellal or its derivatives, giving an odor between sweet pea and furze. — *Chem. Zentr.*, 822, 1927.

A composition for cleaning or polishing varnished surfaces is made from a non-saponaceous emulsion formed of water, 35 to 45 parts, and a light mineral oil, 35 to 50 parts, and tannic acid or alum, one part, and a vegetable gum such as tragacanth which serves as an emulsifying agent. Clay, borax or rotten stone may be added — U. S. Patent 1,675,227.

A detergent is manufactured by treating oleic acid (red oil) with an alkaline solution—potassium or sodium carbonates, potash or soda caustic, or ammonia water—and then incorporating cyclohexanol (hexalin) and a chlorinated hydrocarbon as a stabilizing agent. — Canadian Patent No. 281,881.

A cleaning composition designed for use on china, glass, silver, etc., is made from a volatile liquid such as methyl alcohol 2 gals.; polishing powder such as whiting, 4 lbs.; solution (made by dissolving 8 oz. ammonium carbonate in 8 ozs. water) 8 ozs.



"Distinguished for its high
test and uniform quality."

SODA ASH
CAUSTIC SODA
CALCIUM CHLORIDE
BICARBONATE OF SODA

Michigan Alkali Company

General Sales Department

21 East 40th St. - - - - New York City

Chicago Office: 1316 South Canal Street, Chicago, Ill.

Works: Wyandotte, Mich.

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CONTRACTS AWARDED

C. A. B. Chemical Co., San Antonio, Tex., awarded 40,000 lbs. saddle soap for Fort Sam Houston Quartermaster Department at 10.1c lb.

Armour & Co. awarded 28,000 cakes castile soap for Quartermaster Department, Fort Sam Houston, at 13c. (Total 10,500 lbs. at 13c lb.)

San Antonio Drug Co. awarded 13,754 lbs. naphthalene flakes for Fort Sam Houston Quartermaster Department at 6.75c lb.

J. Eavenson & Son awarded 2,000 lbs. chipped soap for Frankford Arsenal at 8.99c lb.

R. M. Hollingshead Co. awarded 28,400 lbs. saddle soap for Fort Mason, Calif., at 10.89c lb. Also 9,400 lbs. saddle soap for same place at 12.25c lb.

James Good, Inc. awarded 132 bottles glycerin for Veterans' Bureau, Washington, D.C. at \$64.68. Also, 168 bottles glycerin at \$82.52. Also, 2,000 bottles soap liniment at \$436.

Sunshine Soda Co., New York, awarded 12,000 lbs. soda ash for Springfield Arsenal at 1.89c lb.

International Chemical Co. awarded 3,000 lbs. cleaning compound for Raritan Arsenal at 7.85c lb.

B. T. Babbitt, Inc. awarded 161,000 lbs. caustic soda for Wright Field Air Service at 3.35c lb. Harshaw, Fuller & Goodwin Co. awarded 15,180 lbs. caustic potash for same place at 8.3c lb.

John Rothschild & Co., San Francisco, awarded various supplies for Fort Mason Quartermaster Department as follows: shaving soap cakes, 3.3c each; shaving sticks, 6.8c ea.; shaving cream tubes at 20c ea.; toilet soap, 14.8c lb.; tooth paste, 6.8c, Listerine 14.24c, Colgate's 15.8c. James S. Kirk & Co. awarded quantity glycerin soap at 6.9c cake.

Gresalt Products Co., Garwood, N. J. awarded 4,125 lbs. metal cleaner for Frankford Arsenal at 7.5c lb.

E. W. Bennett & Co., San Francisco, awarded quantity metal polish for Fort Mason Quartermaster Department at 13.5c. and quantity paste metal polish at 15.5c.

Grasselli Chemical Co. awarded 500 gals. glycerin for Raritan Arsenal at \$1.50 gal.

Palmolive-Peet Co. awarded quantity Palmolive soap for Chicago Quartermaster Department at 6.35c cake. Franklin MacVeagh & Co., Chicago, awarded quantity Lifebuoy soap at 6c cake. Francis H. Leggett & Co. awarded quantity Lux toilet soap at 6.59c cake. Colgate & Co. awarded quantity Coleo Soap at 6c cake. Procter & Gamble Distributing Co. awarded quantity Ivory soap at 3.9c cake.

Campbell, Holton & Co., Bloomington, Ill., awarded quantity Woodbury soap at 18.1c cake. Palmolive-Peet Co. awarded quantity shaving soap at 22.5c. Gold Dust Corp. awarded quantity washing powder for Fort Snelling at 22c. Windsor Soap Co. awarded quantities washing powder for Custer at 22.9c, for Des Moines at 25c; Savanna at 5.6c, Selfridge Field at 5.6c, and Fort Sheridan at 22.9c.

H. H. Rosenthal Co. awarded 10,000 lbs. sal soda for Quartermaster Department, Brooklyn, at 1.12c lb. City Chemical Co. awarded 500 lbs. oxalic acid for same place at 18c lb. Francis H. Leggett & Co. awarded 200 bots. ammonia water for same place at 7.83c bot. Swift & Co. awarded 700 cans scouring powder for same place at 3.28c can.

Five thousand gallons of ethylene glycol were purchased by the U. S. Air Service for Wright Field recently from the National Carbon Co. at \$2.84 gallon, apparently for anti-freeze use.

FOUNDATIONS



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Housing general offices and research
laboratories of Spencer Kellogg and
Sons.*

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Manila Raw
Crystalite
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Edible
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oil of uniform quality is
demanded.*

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Boston
Chicago
Cleveland
Detroit
Kansas City
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Philadelphia
(Tank Wagon Service in Greater New York)

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RECORD OF TRADE-MARKS

The following trademarks were published in the September issues of the *Official Gazette* of the United States Patent Office in compliance with section 6 of the Act of Sept. 20, 1905 as amended March 2, 1907. Notice of opposition must be filed within thirty days of publication. As provided by Section 14, a fee of ten dollars must accompany each notice of opposition.

Trade-Marks Filed

Apol—This in solid letters in an oval describing cleaning compound for metals. Filed by Commutator Cleanser Co., Brooklyn, N. Y., July 2, 1928. Claims use since May 1, 1928.

Purgo—This in solid letters describing liquids for cleaning automobile, steam and hot-water radiators. Filed by Liquid Veneer Corp., Buffalo, N. Y., June 13, 1928. Claims use since Mar. 31, 1928.

Klo-Ro-San—This on a solid back-ground with a design around it, describing deodorant compounds. Filed by Klo-Ro-San Co., Detroit, Mich., June 13, 1928. Claims use since Sept. 2, 1927.

Con-Tex—This in solid letters describing cleanser, deodorant, disinfectant. Filed by Continental Products Corp., Los Angeles, Calif., June 26, 1928. Claims use since Mar. 1, 1928.

No. 3—This in solid letters describing deodorants. Filed by Odorono Co., Cincinnati, Ohio, June 28, 1928. Claims use since May 1, 1928.

Moth-Pak—This in solid letters describing moth repellent. Filed by Pacific Chemical Co., Los Angeles, Calif., June 28, 1928. Claims use since November 1927.

P. D. S.—This in solid letters describing insecticide, more particularly bedbug destroyer. Filed by Peoples Drug Stores, Inc., Washington, D. C., June 30, 1928. Claims use since 1919.

Thoro—This in outline letters describing dry cleaners for cleaning kid, suede and satin slippers, gloves, etc. Filed by Thoro Products Co., Denver, Colo., Nov. 28, 1927. Claims use since Sept. 15, 1916.

Hebrew characters, describing aluminum cleanser, scouring powder, steel wool and

soap. Filed by I. Rokeach & Son, Inc., Brooklyn, N. Y., May 18, 1928. Claims use since 1891.

Picture of an anchor, describing soap. Filed by F. Ad. Richter & Co., Brooklyn, N. Y., June 19, 1928. Claims use since about 1869.

Nock-O—This on a solid back-ground describing metal-cleaning compound. Filed by Nock Chemical Lab., Pittsburgh, Pa., June 22, 1928. Claims use since about Dec. 20, 1927.

Savon Nannt—This in solid letters describing soap. Filed by Nannt, Inc., Long Island City, N. Y., June 25, 1928. Claims use since April 30, 1928.

Amor Skin—This in solid letters describing soaps. Filed by Amorskin Corp., New York, N. Y., July 5, 1928. Claims use since June 1927.

Norub—This in outline letters written on a cross inside a circle, describing shaving powder. Filed by Norub Co., Ossining, N. Y., July 10, 1928. Claims use since Nov. 1, 1927.

Klen-a-sol—This in solid letters underlined describing disinfectant and cleanser. Filed by Salol Chemical Co., Chicago, Ill., April 28, 1928. Claims use since Sept. 1, 1927.

Fly-D-Part—This in solid letters describing insecticide. Filed by R. H. Macy & Co., Inc., New York, N. Y., June 22, 1928. Claims use since May 22, 1928.

Floramye—This in solid letters describing soaps. Filed by L. T. Piver, Inc., Wilmington, Del. and New York, N. Y., July 17, 1928. Claims use since Oct. 9, 1895.

Pacquin's—This in solid letters describing cleansing and shaving soap in solid, liquid, powdered or cream form. Filed by Pacquin, Inc., New York, N. Y., July 26, 1928. Claims use since Dec. 17, 1920.

Dulcia—This in solid letters describing toilet soaps and shaving creams. Filed by Cheramy, Inc., New York, July 31, 1928. Claims use since July 21, 1928.

Perfectine—This in solid letters describing tooth powder, tooth paste and tooth wash. Filed by Manhattan Drug Co.,

Reach every North and South American Maker of

Soaps Cleansers
Disinfectants Polishes
Insecticides Deodorants

and Related Products

Through the

SOAP
BLUE BOOK



What the BLUE BOOK will contain—

A complete list of materials, equipment, containers, bulk and private label products, etc., bought by makers of soaps of all kinds, disinfectants, household insecticides, germicides, deodorants, cleansers, polishes and similar products with a carefully compiled list of companies which are headquarters for each. The BLUE BOOK will be divided into four sections in order to facilitate its use—

1. Raw Materials
2. Machinery and Equipment
3. Containers, Closures, Wrapping Materials, etc.
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Where the BLUE BOOK will go—

The purchasing department of every North and South American manufacturer of the above named products, all of whom receive SOAP regularly, will have at least one copy of the SOAP BLUE BOOK. Coverage of the industry will be complete. This first edition will total 2000 copies. Coincident with the mailing of the BLUE BOOK, the U. S. Post Office receipt, proving exact circulation, will be published in SOAP.

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136 LIBERTY ST.

NEW YORK CITY

Brooklyn, N. Y., April 26, 1928. Claims use since Aug. 16, 1901.

Picture—Of label, describing shampoo preparations. Filed by H. T. Tagore, Union City, N. J., June 1, 1928. Claims use since November 1922.

Zeno—This in solid letters describing dentifrice. Filed by Oro Powder Co., Portland, Oregon, July 19, 1928. Claims use since July 1, 1928.

Zorex—This in outline letters describing deodorants, disinfectants and insecticides. Filed by Zoro Co., Chicago Ill., July 20, 1928. Claims use since June 27, 1928.

Ender—This in solid letters describing insecticides. Filed by Koch Chemical Co., Evansville, Ind., Aug. 1, 1928. Claims use since May 1, 1928.

Death to Dirt—This under the picture of a soldier stabbing a reptile, describing metal-polishing cream, soap powder, scouring powder, etc. Filed by Barnett Janitor Supply Co., New York, N. Y., May 21, 1928. Claims use since June 12, 1927.

Kal—This in solid letters describing general household cleaning preparation. Filed by M. O. Wilkins Corp., New York, N. Y., May 31, 1928. Claims use since March 6, 1928.

Littlejim—This in solid letters describing cleaning preparation in liquid, paste and soap form. Filed by Littlejam Co., Bluefield, W. Va., June 28, 1928. Claims use since June 1, 1928.

Zit—This in solid letters over the words "Dry Cleaner," describing dry-cleaning fluid for removing spots from fabrics and clothing. Filed by Wilbert Products Co., Inc., New York, N. Y., June 29, 1928. Claims use since April 16, 1928.

Trade Marks Granted

245,230—Shaving cream. Cora M. Gillman, Youngstown, Ohio. Filed March 5, 1928. Serial No. 262,604. Published May 15, 1928.

245,231—Liquid dry-cleaning compound. The R. B. Chemical Company, Southington, Conn. Filed March 3, 1928. Serial No. 262,576. Published May 22, 1928.

245,239—Liquid soap. Vestal Chemical Co., St. Louis, Mo. Filed February 9, 1928. Serial No. 261,469. Published April 3, 1928.

245,289—Soap and soap chips. Allen B. Wrisley Company, Chicago, Ill. Filed March 22, 1927. Serial No. 246,190. Published May 15, 1928.

(Continued on Page 83)

New Patents

Conducted by
LANCASTER & ALLWINE
Registered Attorneys

PATENT AND TRADEMARK CAUSES

402 Ouray Building, Washington, D. C.

Complete copies of any patents or trademark registrations reported below may be obtained by sending 25c for each copy desired to Lancaster & Allwine. Any inquiries relating to Patent or Trademark Law will also be freely answered by these attorneys.

No. 1,681,237, INSOLUBLE SOAP and method of making an insoluble soap from aldehyde fatty acid mixtures of mineral oil, Patented August 21, 1928 by Joseph Hidy James of Pittsburg, Pennsylvania, assignor to Clarence P. Byrnes, trustee, Sewickley, Pennsylvania. The method of treating a partial oxidation product of mineral oil containing aldehyde fatty acids from the other constituents of the partial oxidation product, and forming substantially insoluble soaps of said acids.

No. 1,681,355, SHAVING STICK, Patented August 21, 1928 by Henri Lowenfield, of Paris, France. A shaving soap stick having one end thereof adapted to be moved along and in contact with the face of the user, the said end consisting of deep recessed areas and solid partitions dividing and spacing said recessed areas, the total cross-sectional area of the solid portions of the face contacting end of the stick being relatively small as compared with the total area of the said end.

No. 1,681,308, WASHING APPARATUS, Patented August 21, 1928 by Samuel D. Parker of Boston, Massachusetts, assignor to Darlo Company of Boston, Mass. A washing apparatus comprising a faucet for selective discharge of clear or soapy water having a body provided with a water passage having a downwardly extending outlet and a soap container closure formed integrally on the underside of the body, a soap container depending from the body and secured to the closure and adapted to contain a supply of soap to be dissolved by water diverted from the main passage.

No. 1,681,362, DISHWASHING APPARATUS, Patented August 21, 1928 by Albert Pike of Winthrop, Massachusetts, as-

(Continued on Page 81)

MYSORE GOVERNMENT

East Indian Sandalwood Oil

SOLE DISTRIBUTORS

Essenflour Products, Ltd.

Mysore

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*Distillers of Essential Oils and
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Market Report on ESSENTIAL OILS AND AROMATICS

(As of October 8, 1928)

NEW YORK—Mixed movements in prices were noted among the essential oils and aromatic chemicals during the past month. Some expansion in demand for a few oils was noted and brought a tightening of prices on spot. Several declines were recorded, notably orange and lemon. Firmer positions were noted in geraniums, clove, cassia, and sandalwood oils.

OIL ANISE

Demand has been little more than routine during the period and prices have remained about the same, although one supplier indicated he was meeting lower price competition. Spot oil closed at 56c to 58c lb. for redistilled.

OIL BERGAMOT

The lower prices noted for lemon and orange apparently had no effect on bergamot here. The spot price remained the same at \$5.00 lb. all the way to \$6.00 as to brand. Stocks of

bergamot in primary markets are still very limited and closely held.

OIL CASSIA

Stronger demand and consequent higher price ideas on the part of spot sellers put the price of cassia redistilled up to \$2.30 to \$2.40 lb. during the month. Supplies are adequate for demand, but are held more strongly by importers.

OIL CEDARLEAF

To secure a good cedarleaf oil, buyers are paying \$1.20 and \$1.30 lb. spot. Cheaper oils can be had. Position firm. Cedarwood quiet and firm at 26c drums up.

OIL CITRONELLA

A steady demand for citronella has not affected prices, although the spot situation appears somewhat firmer. Ceylon spot drums closed at 41c lb. up to 45c as to seller and quantity. Java oil closed unchanged at 28c to 50c lb.



Integrity & Organization Are Behind The D&O Label

Oil Geranium, Bourbon
Oil Geranium, Algerian
Oil Bergamot, Sanderson's
Oil Patchouly, D & O's

We derive PLEASURE IN SELL-
ING—as you will derive BENE-
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NATURALLY PURE OILS

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The integrity of the house is reflected in the quality of its products

Trade **LANUM** Mark

(Lanolin—Adeps Lanae Merck)

Particularly adapted for shaving creams, soaps, and other toilet preparations. Free from the impurities usually found in ordinary Lanolin.

Send for a sample

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MANUFACTURING CHEMISTS

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TERPINEOL — V. F.

Odor — Clean Refreshing — Lila-like
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THE KIND YOU WILL PREFER

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OIL GERANIUM

Replacement prices are considerably higher and the spot trend of prices is upward. At the close, African oil commanded \$3.75 to \$4.25, with better quality oil inside at \$4.00 lb. Bourbon was \$4.50 to \$5.00. Demand for both appeared to ease off at the higher prices. Oil bought to-day for shipment cannot be offered spot at the foregoing prices by dealers.

OIL LAVENDER

Position somewhat firmer after the reduction of crop estimates in France. Low priced oils are still available here, but good quality high test lavender is commanding \$3.75 to \$4.00 lb. spot.

OIL PATCHOULI

Large stocks have brought further offers of cheaper patchouli here. Down to \$5.50 lb. is quoted with higher quality oils commanding up to \$7.00.

OIL SANDALWOOD

Standard oil has brought up to \$7.25 lb. during the period for immediate delivery owing to a temporary shortage. The price, however, from first hands remains at \$7.00 lb. spot.

MISCELLANEOUS

The strong position of clove spice may force the price of oil above the \$1.75 level quoted at the close. Prices for both natural and synthetic menthol are both sharply higher.

W. G. Ungerer Back From Europe

W. G. Ungerer, president of Ungerer & Co., importers of essential oils and aromatic chemicals, returned from Europe aboard the *France*, landing at New York on October 3. Mr. Ungerer spent altogether six months in Europe, having sailed from New York early last April. His extensive trip which combined business and pleasure was the first he had made to Europe for five years past. While abroad, he visited the flower producing regions of France and studied crop conditions there. His observations on conditions will be published later. He also visited his company's principals in Switzerland and spent some time in England.

Arrivals of copra at Manila continue heavy, according to cable received September 27 from Trade Commissioner Howard at Manila. Estimates place the arrivals at 500,000 sacks for September and some 420,000 sacks for October. All mills are working on heavy contracts, but prices are low.

J. A. Burns, secretary of A. Gross & Co., New York producers of stearic acid and red oil, is spending a short vacation in Bermuda. He left New York on Sept. 29.

Essential Oils-Aromatic Chemicals for Perfumers and Soapmakers

LAVENDER OIL

New crops of Lavender are now being marketed, and we would be pleased to send samples and quotations on your requirements.

Benzylacetate F. F. C.**FLOSAL**

An original chemical product, especially interesting to Soapmakers because of its stability, low price and high odor value.

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Soda Ash

Light - Dense

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Say you saw it in SOAP!

Market Report on SOAP AND DISINFECTANT CHEMICALS

(As of October 8, 1928)

NEW YORK—Reports from various quarters indicate that there is a general seasonal expansion in demand for chemicals. Both contract shipments and spot business appear to reflect general industrial activity throughout the country in most industries. Price changes in chemicals have been few. Changes appear to favor upward revision at this time rather than lower prices, although the opinions heard would indicate that no material movement in the general level of prices is likely.

ALKALIES

Continued movement of heavy shipments of alkalis on contract to leading consuming industries has been reported. Expansion in demand has been large in one or two industries. Speculation regarding 1929 alkali prices is already being indulged in among the soap makers. Little change, if any, is anticipated. (See Page 25.)

ROSINS

A shrinkage of rosin stocks at Savannah and Jacksonville was noted during the past month, due primarily to continued fair sized shipments and more or less expected reduced arrivals from the interior. The prices for rosins showed a slight upward move during the month, but apparently not proportionate to the cut down in stocks. Further reduction in stocks over the balance of October may bring firmer prices in early November. At the close, spot rosins were quoted: B, \$9.30; H, \$9.45; N, \$9.85; WG, \$10.00; WW, \$11.00. Wood rosin was higher at \$7.15 bbl. works.

GLYCERIN

There was still a tendency on the part of refiners to move up glycerin prices during the period, but with cheap foreign glycerin making a stronger bid for business, price advances did not meet with a great deal of success. One refiner put up C.P., but others held at 15c pre-

THE NEWPORT PRODUCTS

*for
soap
makers*

TETRALIN and HEXALIN

**Hydrogenated Coal Tar Bases with
High Boiling Points and
Better Dissolving Properties**

for oils, waxes, greases and fats than the solvents commonly used—therefore they are ideal for incorporation with Soaps and Detergents destined to be used in textile processing.



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| 1. More convenient proximity. | 4. Larger stocks, hence complete shipments. |
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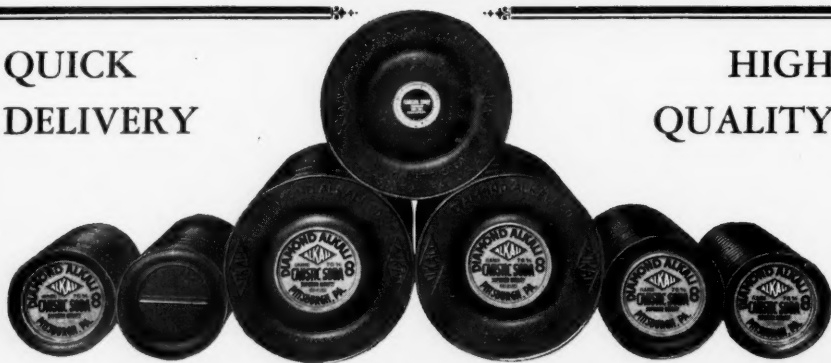
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GRASSELLI GRADE
A Standard Held High for 89 Years

**QUICK
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Plus a Dependable Source of Supply

That, in short, is the ideal combination of advantages you get when you specify Diamond Alkalies.

Diamond Alkali service is as near as

your telephone. If your local distributor is not listed in your telephone book write or wire us and we will see that your alkali needs are immediately supplied.

Diamond Alkali Company

Pittsburgh, Pa.



and Everywhere

viously quoted. Dynamite was named at 12½c, but it was reported possible to buy foreign, duty paid, laid down New York at 12c. There are still good reserves reported held for the anti-freeze trade. Crudes showed no change. Basically, the glycerin market is in a distinctly better position than it was a month or two ago.

COAL-TAR PRODUCTS

Naphthalene is already commanding attention on contract for 1929. Demand is reported to be unusually heavy with prices quoted for future delivery about the same as were named through early 1928, 5c for flakes and 5½c for balls. Cresylic acid, creosote oil, tar acid oils, all are reported firm and unchanged during the period. Demand for paradichlorbenzene continues to expand remarkably.

MISCELLANEOUS

Insect powder was commanding 48c to 50c lb. from some sellers while others who were less bullish were asking down to 44c for pure powder. The flower position in Dalmatia and Japan appears firm. Shippers are asking a sharp premium for future shipments. Dalmatia is offering little or nothing for shipment. New trisodium phosphate products keep the demand for this chemical extremely active. Acetone prices are higher.

National Pumice Stone Co., New York, according to an announcement by Sol Perrin of that firm, has been remodelling and expanding their plant at Astoria, Long Island, which will increase pumice grinding facilities by about ten tons per day. The plant changes which are about completed are to take care of a fifty per cent increase in sales which the company reports for the first eight months of 1928.

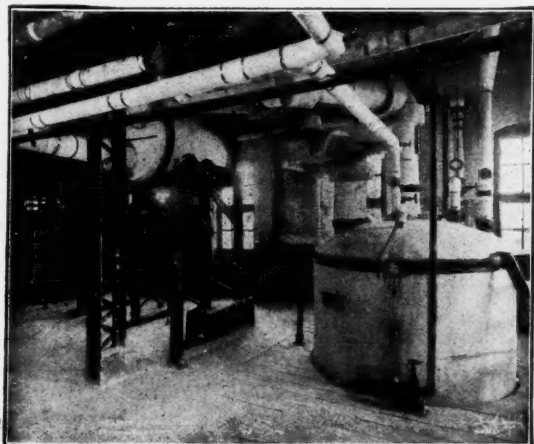
Colgate-Palmolive-Peet Co. officials are now engaged in reorganizing branch offices of Colgate & Co. and the Palmolive-Peet Co. Where they have been operating separately in the same territory in the past they are being joined, a recent case having occurred at Memphis. The old Palmolive-Peet office at Memphis will house the new branch of the combined companies, Colgate & Co. salesmen having formerly worked out of Nashville. M. Marlin, St. Louis division manager, C. B. Duncan, head of the package goods department, Chicago, and A. E. Taylor, head of the white soap department, Chicago, assisted J. B. Waters, Memphis sales manager, in the reorganization.

Yardley & Co., English soap house, has moved its Chicago office to 461 West Erie St.



GLYCERINE REFINING PLANTS

The most efficient Glycerine Refining Plant operating with the lowest refining loss and the highest yield of finished product.



The outstanding features of the WURSTER & SANGER process and equipment are:

1. Highest yield of distilled glycerine.
2. Highest percentage of finished glycerine obtained on direct distillation, eliminating rehandling and losses.
3. Lowest steam consumption.
4. Extreme simplicity of operation.
5. Compactness of the plant.
6. Low operating costs.

**New Plants Designed—
Old Plants Remodeled**

Complete Plants for

Crude, Dynamite and C. P. Glycerine
Laundry, Toilet and Liquid Soaps
Spray-Process Soap Powder
Fatty Acid Distillation
Fat Splitting, Stearic Acid and Red Oil
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5201 Kenwood Avenue
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PALM OIL

SOFTS MEDIUMS HARDS

Bulk or Packages

Direct importations from our own
Produce Stations in the Oil
Palm Districts of West Africa.

Palm Kernel Oil

Crushed and Extracted
Bulk and Packages

Direct Importers of
Sumatra and Malay

Palm Oil

*Rice Oil — Shearut Oil — Sun Flower
Oil — Soya Bean Oil — Sesame Oil*

AFRICAN & EASTERN TRADING CO., Inc.

8-10 Bridge Street

New York

Buy direct from the Manufacturer!



Vegetable Oils — Fatty Acids

CORN — COCONUT — COTTONSEED — PEANUT
and PALM KERNEL

There are numberless obvious advantages in buying your raw materials direct from the manufacturer. Not the least lies in our ability to handle our customers' orders promptly at all times. Over fifty years' experience in this business means that the oils and fatty acids will be right in quality and price.

What are your needs?

Barrels, Drums or Tank Cars

Spot or Shipment

C. F. SIMONIN'S SONS, INC.

Established 1876

TIOGA and BELGRADE STREETS - PHILADELPHIA

Say you saw it in SOAP!

Market Report on TALLOW, GREASES AND OILS

(Written Oct. 8, 1928)

NEW YORK—Buyers of oils and fats have continued actively in the market, during the period closing, the trade reporting that a good volume of business has passed. Cotton oil eased off, but, on the strength of the Oct. 8 crop report, increases are looked for. Tallows have been firm, with higher prices in a market where offerings have been none too plentiful. Greases are also higher. Olive oil foots are practically unchanged, with replacement costs above the spot market. Olive oil is slightly lower. Coconut oil is easy at unchanged prices. The palm oil situation has tightened up materially, with prices higher and practically nominal at the new levels.

COTTONSEED OIL

The cottonseed oil market narrowed down markedly during the past week, the trade generally awaiting the appearance of the Govern-

ment cotton report. Soft p.s.v. sales ranged from 10c a pound up, with futures as high as 10 $\frac{5}{8}$ c. Crude oil sold at 8 $\frac{3}{8}$ c. These prices represent a decline from the figures reported a month ago. The Government report, which came out Oct. 8, predicted the crop at 13,995,000 bales, below previous estimates and consequently will exert a bullish influence on the market. Up to this time the market had not reacted, but prices increases are of course looked for.

TALLOW

This item is quite firm, with prices fractionally higher than they were at this time last month. The strong condition prevails in the Middle West as well as in the East, with last sales of city extra here at 9 c. f.o.b. sellers' plant. Holders are now asking 9 $\frac{1}{4}$ c. Last sales of fancy goods were made at 9 $\frac{3}{8}$ c, with 9 $\frac{1}{2}$ c bid shortly after and turned down. It is generally believed that producers are holding

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for 95 $\frac{3}{4}$ c. The strong cotton oil market is of course supporting the natural strength in tallow.

GREASES

Higher prices rule in the grease market, with buyers active in all sections. House grease is up to 83 $\frac{3}{4}$ c inside, with yellow at 81 $\frac{1}{4}$ c. Choice white is selling around 11c.

OLIVE OIL FOOTS

The spot market is slightly under last month's closing, ranging from 103 $\frac{3}{4}$ c to 10 $\frac{1}{2}$ c. Goods afloat, to arrive in the next week or ten days, are also being priced at 103 $\frac{3}{4}$ c, inside. Prices range down to 101 $\frac{1}{4}$ c for October and November shipments. These figures are considerably below replacement costs, as represented in producers' prices, the latter figuring at about a 10 $\frac{3}{4}$ c landing cost. The lower spot market is caused by offerings of resale lots and by the unloading of speculative purchases, combined with a general substitution of red oil through the consuming trade.

OLIVE OIL

At the peak, commercial olive oil sold up to \$1.35 a gallon, the turn having carried prices down to \$1.25, during the period closing. Offerings lessened, however, bringing the price back to \$1.30. Conditions in producing centers continue firm.

COCONUT OIL

The higher tallow market has tightened the coconut oil situation somewhat, although large quantities of goods are still offered. Buyers are not showing any particular amount of interest at the present time, apparently having covered when lower figures were quoted a short time ago. Coast tanks are at 7 $\frac{3}{4}$ c, inside, ranging to 7 $\frac{7}{8}$ c, with spot tanks inside at 8 $\frac{1}{4}$ c. Although copra arrivals have eased off slightly, production is still gaited far beyond normal, with all mills operating.

PALM OIL

The palm oil situation is very tight, large factors stating that it has been five years since supplies were so hard to obtain. Nearby oil is in good demand, with offerings strictly limited. Prices are practically nominal, with shipment Niger at 7.90 and Lagos at 8.46. Spot goods are about a half cent over these figures. Until the new crop comes in, in December, it is expected that no volume will be attained in shipments.

PALM KERNEL OIL

Quiet, but steady, in spite of the weakness in coconut oil, at 8.35 c.i.f. New York and on spot, in bulk. Spot barrels range from 9.15 to 9.20.

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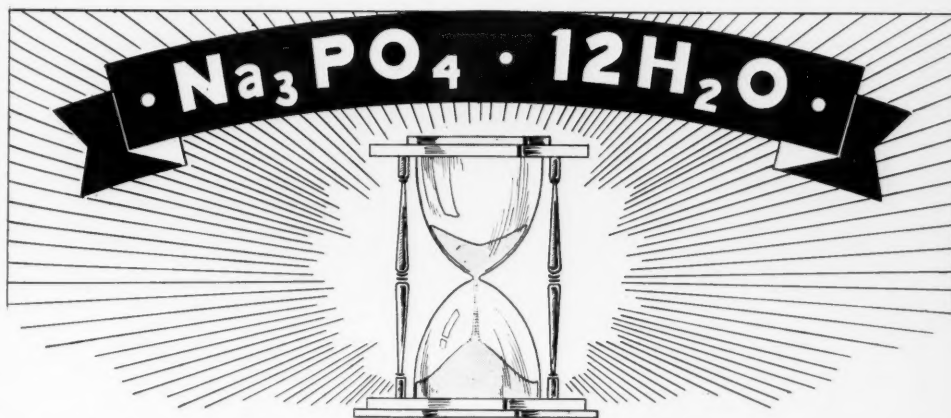
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CURRENT PRICE QUOTATIONS

Chemicals

Acetone, C. P., drums	lb.	.17	.18	Glycerin, C. P. drums	lb.	.15	.15½
Acid, Boric, bbls.	lb.	.08¼	.08½	Dynamite, drums	lb.	.12½	.12½
Cresylic, 95%, dk., drums	gal.	.71	.73	Saponification, tanks	lb.	.08½	.08½
97-97%, pale, drums	gal.	.75	.76	Soaps, Lye, tanks	lb.	.07½	.07½
Formic, 85%, tech.	lb.	.11	.12	Hexalin, drums	lb.	—	.60
Oxalic, bbls.	lb.	.11	.14	Kieselguhr, bags	ton	65.00	75.00
Salicylic, tech.	lb.	.37	.40	Lime, live, bbls.	100 lb.	1.10	1.20
Sulfurous, 6% cbys.	lb.	.06	.07	Menthol cases	lb.	6.00	6.50
Adeps Lanae, hydrous, bbls.	lb.	.14	.16	Synthetic	lb.	3.50	4.00
Anhydrous, bbls.	lb.	.15	.17	Mercury Bichloride, kegs	lb.	1.65	1.80
Alcohol, Ethyl, U. S. P., bbls.	gal.	2.75	3.00	Naphthalene, ref. flakes, bbls.	lb.	.05	.06
Complete Denat., No. 5, drums ext. gal.	gal.	.43	.45	Nitrobenzene (Myrbane) drums	lb.	.09	.12
Alum, potash, lump, lb.	lb.	.03½	.04	Paradichlorobenzene, bbls.	lb.	.16	.19
Ammonia Water, 26 deg., drums wks. lb.	lb.	.03½	.04	Paraformaldehyde, cases	lb.	.40	.42
Ammonium Carbonate, tech., bbls.	lb.	.08½	.13	Petrolatum, bbls. (as to color)	lb.	.04	.09
Bay Rum, Porto Rico, denat., bbls.	gal.	.85	.90	Phenol, (Carbolic Acid), drums	lb.	.14	.16
St. Thomas, bbls.	gal.	.85	.90	Pine Oil, bbls.	gal.	.66	.67
Domestic, bbls.	lb.	.70	.80	Potash, Caustic, drums	lb.	.07½	.07½
Benzaldehyde, U. S. P.	lb.	1.15	1.25	Potassium Bichromate, casks	lb.	.09	.09½
Technical	lb.	.60	.65	Pumice Stone, powd., drums	100 lb.	2.00	3.00
Bleaching, Powder, drums	100 lb.	2.00	2.50	Rosins (600 lb. bbls. gross for net)—			
Borax, pd., cryst., bbls., kgs.	lb.	.04½	.05	Grade B to H, basis 280 lb.	bbl.	9.30	9.45
Carbon Bisulphide, drums	lb.	.05	.06	Grade K to N	bbl.	9.65	10.00
Carbon Tetrachloride	lb.	.06½	.07½	Grade WG and WW	bbl.	10.00	11.00
Caustic, see Soda Caustic, Potash Caustic				Wood, works	bbl.	—	7.15
China Clay, filler	ton	15.00	30.00	Rotten Stone, powd., bbls.	lb.	.02½	.05
Cresol, U. S. P., drums	lb.	.14	.17	Silica, Ref., floated	ton	20.00	30.00
Cresote Oil, drums	gal.	.14	.16	Soda Ash, Contract, wks., bags	100 lb.	1.38	1.50
Formaldehyde, bbls.	gal.	.08½	.09	Five bbls., up, local	100 lb.	2.20	2.50
Fullers Earth, bags	lb.	.01¾	.02	Soap, Mottled 40 lb. box	lb.	.15	.18
				Powdered White, U. S. P.	lb.	.29	.30
				Green, U. S. P.	lb.	.07	.07½
				Whale Oil, bbls.	lb.	.04½	.05



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Cod, Ne

Copra, 1

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Soda Caustic, Contract, wks. sld....100 lb.	2.90	3.10	Lard Oil, edible prime	lb.	—	.16½
Five drums up, solid, local.....100 lb.	3.66	3.80	Extra, bbls.	lb.	—	.13¼
Five drums up, grnd. flk.....100 lb.	4.31	4.55	Extra, No. 1 bbls.	lb.	—	.13
Soda Sal, bbls. ....	.90	1.00	No. 2, bbls.	lb.	—	.12
Soda, Sesquicarbonate, bbls. ....100 lb.	3.00	3.75	Linseed, raw, bbls., spot	lb.	.097½	.11
Sodium Bicarbonate .....	.18	.19	Tanks, raw	lb.	.09	.09¼
Sodium Chloride (Salt)	ton	13.00	Boiled, 5 bbl. lots	lb.	—	.11¼
Sodium Fluoride, bbls. ....	.08¾	.09½	Menhaden, Crude, tanks, Balt.	gal.	.41	.42½
Sodium Hydrosulphite, bbls. ....	.26	.28	Light pressed, bbls.	gal.	.60	.61
Sodium Phosphate, bbls. ....	.04	.05	Yellow, bleached, bbls.	lb.	.62	.63
(Trisodium phosphate)			Extra bleached, bbls.	gal.	.65	.67
Sodium Silicate, 40 deg., drum....100 lb.	.75	1.20	Oleo Oil, No. 1, bbls., N. Y.	lb.	—	.13¼
Drums, 60 deg., wks. ....100 lb.	1.65	1.90	No. 2, bbl., N. Y.	lb.	—	.12
In tanks, 10c less per hundred works.			No. 3, bbls., N. Y.	lb.	—	.11
Tar Acid Oils, 15-25%	gal.	.26	Olive, denatured, bbls., N. Y.	gal.	1.30	1.35
Zinc Oxide, lead free	lb.	.07	Shipments	gal.	1.30	1.35
Zinc Stearate, bbls. ....	.18	.18½	Foots, bbls., N. Y.	lb.	.10¾	.10½
			Shipments	lb.	—	.10¼
Oils—Fats—Greases						
Castor, No. 1, bbls.	lb.	.13½	Palm, Lagos, casks spot	lb.	—	.09
No. 3, bbls.	lb.	.12¾	Shipments	lb.	—	.08½
Coconut, tanks, N. Y.	lb.	—	Niger casks, spot	lb.	—	.08¾
Tanks, Coast	lb.	.07¾	Shipments	lb.	—	.07¾
Fatty acids, mill, tanks	lb.	.11	Palm Kernel, pkgs.	lb.	.09½	.09½
Cod, Newfoundland, bbls.	gal.	.66	Tank cars	lb.	—	.08¾
Copra, bags, Coast	lb.	—	Peanut, refined, bbls., N. Y.	lb.	—	.13½
Corn, tank, mills	lb.	.08¾	Crude, bbls., N. Y.	lb.	—	.12
Bbls., N. Y.	lb.	.10	Red Oil, distilled, bbls.	lb.	.09¾	.10¼
Fatty acid	lb.	.087½	Saponified, bbls.	lb.	.10	.10½
Cottonseed, crude, tanks mill	lb.	.08¾	Tanks	lb.	—	.09
PSY	lb.	.10	Soya Bean, crude tks., Pacific Coast lb.	lb.	.09¾	.10
Fatty Acids, mill, bbls.	lb.	—	Crude, bbls., N. Y.	lb.	.12¾	.12½
Degras, Amer., bbls.	lb.	.04½	Refined, bbls., N. Y.	lb.	.13¼	.13½
English, bbls.	lb.	.05	Stearic Acid			
German, bbls.	lb.	.03¾	Double Pressed	lb.	.14½	.15
Neutral, bbls.	lb.	.07¾	Triple pressed, bgs.	lb.	.17	.17½
Greases, choice white, bbls., N. Y.	lb.	.08½	Stearine oleo, bbls.	lb.	.12¾	.12½
Yellow	lb.	—	Tallow, fancy, f. o. b. plant	lb.	—	.09½
Brown	lb.	—	City, extra loose f. o. b. plant	lb.	—	.09¼
House	lb.	—	Tallow oils, acidless, tanks, N. Y.	lb.	—	.11¾
Bone Naphtha	lb.	—	Bbls., c. l., N. Y.	lb.	—	.12
Lard, prime steam, tierces	lb.	—	Whale, nat. winter, bbls., N. Y.	lb.	—	.78
Compound tierces	lb.	—	Blehd., winter, bbls., N. Y.	gal.	—	.80
			Extra blehd., bbls., N. Y.	gal.	—	.82

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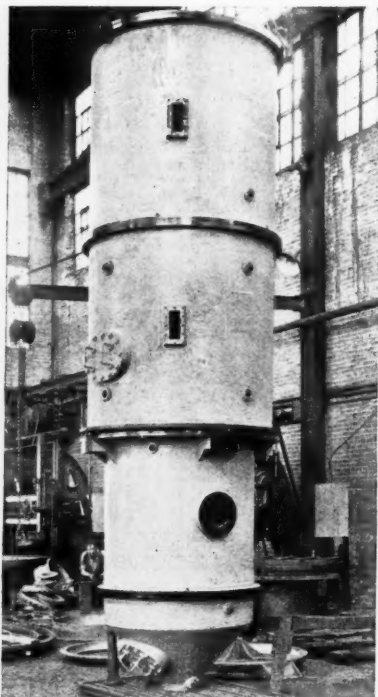
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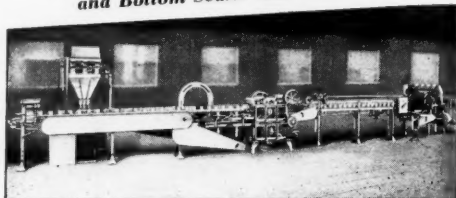
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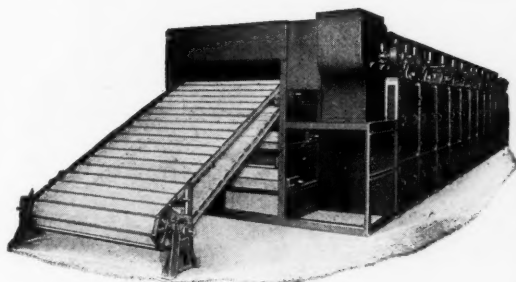
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Bitter, F. F. P. A.lb.	3.00	3.75	Lemongrass, native, canslb.	.90	1.00
Sweet, canslb.	.70	.75	Linaloe, Mex., caseslb.	2.25	2.40
Apricot, Kernel, cans ....lb.	.45	.50	Neroli, Artificial ....lb.	10.00	20.00
Anise, cans ....lb.	—	—	Nutmeg, U. S. P., tins ....lb.	1.65	1.70
U. S. P., cans ....lb.	.56	.58	Orange, Sweet, W. Ind., tins ....lb.	5.25	5.50
Bay, tins ....lb.	1.75	1.90	Italian, cop. ....lb.	5.50	6.00
Bergamot, coppers ....lb.	5.00	6.00	Distilled ....lb.	4.75	5.00
Artificial ....lb.	2.50	3.50	Origanum, cans tech. ....lb.	.25	.28
Birch Tar, rect., bot. ....lb.	.50	.55	Patchouli ....lb.	5.50	6.50
Crude, tins ....lb.	.13	.14	Pennyroyal, dom. ....lb.	1.90	2.00
Bois de Rose, tins ....lb.	1.75	2.40	Imported ....lb.	1.30	1.35
Cade, cans ....lb.	.26	.28	Peppermint, nat. cases ....lb.	3.25	3.50
Cajuput, native, tins ....lb.	.75	.80	Redis., U. S. P., cases ....lb.	3.50	3.75
Calamus, bot. ....lb.	3.25	3.50	Petit Grain, S. A., tins ....lb.	1.75	1.80
Camphor, Sassy, drums ....lb.	.15½	.16	Pinus Sylvestris ....lb.	.75	1.00
White, drums ....lb.	.11	.12	Pumilio, U. S. P. ....lb.	2.25	2.50
Cananga, native, tins ....lb.	3.25	3.35	Rose, French ....oz.	11.00	12.00
Rectified, tins ....lb.	3.60	3.75	Bulgarian ....oz.	12.00	15.00
Caraway Seed ....lb.	1.70	1.80	Artificial ....oz.	2.00	2.75
Cassia, 80-85% ....lb.	—	—	Rosemary, U. S. P., drums ....lb.	.45	.50
Redistilled, U. S. P., cans ....lb.	2.30	2.40	Tech., lb. tins ....lb.	.30	.33
Cedar Leaf, tins ....lb.	1.20	1.30	Sandalwood, E. Ind., U. S. P. ....lb.	7.00	7.40
Cedar Wood, light, drums ....lb.	.26	.28	W. Indian (Amayris) ....lb.	2.25	2.40
Citronella, Java, drums ....lb.	.48	.50	Sassafras, U. S. P. ....lb.	.80	1.00
Citronella, Ceylon, drums ....lb.	.41	.45	Artificial ....lb.	.25	.27
Cloves, U. S. P., cans ....lb.	1.75	1.80	Spearmint, U. S. P. ....lb.	4.25	4.50
Copaiba ....lb.	.65	.70	Thyme, red, U. S. P. ....lb.	.75	.80
Eucalyptus, Austl., U. S. P., cans ....lb.	.57	.59	White, U. S. P. ....lb.	.85	.90
Fennel, U. S. P., tins ....lb.	.80	.90	Tech. ....lb.	.60	.70
Geranium, African, cans ....lb.	3.75	4.25	Vetivert, Bourbon ....lb.	6.00	9.00
Bourbon, tins ....lb.	4.50	5.00	Java ....lb.	20.00	22.00
Hemlock, tinslb.	1.00	1.10	Ylang Ylang, Bourbonlb.	9.00	12.00
Lavender, U. S. P., tinslb.	2.75	4.00			
Spike, Spanish, canslb.	.90	1.25			

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means simple production of the finest types of
 Shaving Creams - saves you 30% to 50%.

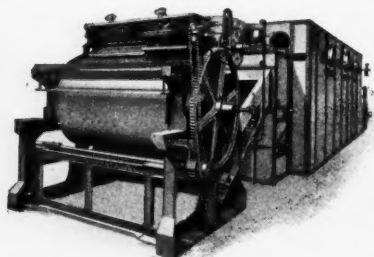
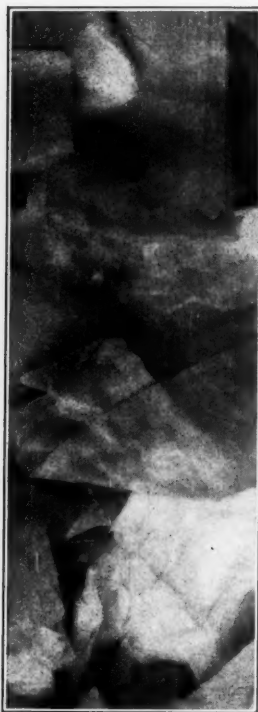
Neutral White Soaps

Let us tell you what *Laboratory Control*
 really means for the producer of dentifrices and
 toilet requisites.

We also furnish bulk finished shaving creams.

Let our Laboratory help you on your Soap problems.

JOHN POWELL & CO., INC., 114 E. 32ND ST., N. Y.

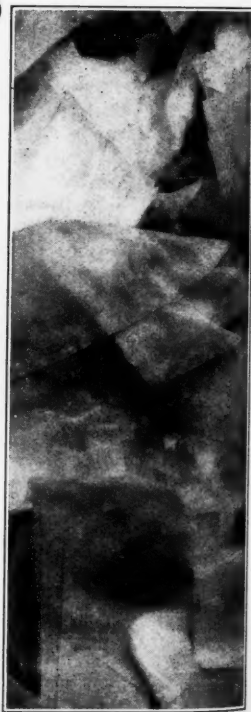


THIN CHIPS!

This new Proctor Dryer produces Soap Chips of transparent thinness—exactly the kind now in popular demand for package laundry soap—also the chip that can be produced most efficiently in making cake toilet soap.

New throughout—new chilling rolls—new dryer, this machine not only produces the most satisfactory soap chip, but it excels in high capacity, saving of floor space, reduced steam consumption, low cost of operation. Write.

PROCTOR & SCHWARTZ, Inc.
 PHILADELPHIA



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 Eucalypt
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 Geranyl
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 Ionone
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 Linalool
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 Menthol
 Methyl
 Anthrac
 Paracry
 Salicyl
 Mirbane,
 Musk A
 Ketone
 Xylene

Aromatic Chemicals

Acetophenone, C. P.	lb.	3.00	3.75
Amyl Cinnamic Aldehyde	lb.	6.00	12.00
Anethol	lb.	1.10	1.25
Benzaldehyde, tech.	lb.	.60	.65
Benzyl Acetate	lb.	1.05	1.35
Alcohol	lb.	1.00	1.50
Citral	lb.	2.75	3.00
Citronellal	lb.	2.75	3.25
Citronellol	lb.	4.00	5.00
Citronellyl Acetate	lb.	13.00	14.00
Coumarin	lb.	3.60	3.75
Diphenyl oxide	lb.	.90	1.00
Eucalyptol, U. S. P.	lb.	.95	1.00
Eugenol, U. S. P.	lb.	2.50	3.00
Geraniol, Domestic	lb.	1.25	2.00
Imported	lb.	2.00	5.00
Geranyl Acetate	lb.	2.75	3.50
Heliotropin, dom.	lb.	1.75	2.00
Hydroxycitronellal	lb.	10.00	11.00
Indol, CP	oz.	6.00	6.50
Ionone	lb.	5.00	9.00
Iso-Eugenol	lb.	3.75	3.90
Linalool	lb.	3.00	5.00
Linalyl Acetate	lb.	3.50	7.50
Menthol	lb.	6.00	6.25
Methyl Acetophenone	lb.	3.75	4.25
Anthranilate	lb.	2.25	3.00
Paracresol	lb.	8.00	9.00
Salicylate, U. S. P.	lb.	.40	.45
Mirbane, rect.	lb.	.10	.12
Musk Ambrette	lb.	6.00	7.00
Ketone	lb.	7.00	10.00
Xylene	lb.	2.25	2.75

Phenylacetaldehyde	lb.	5.00	8.00
Phenylacetic Acid, 1 lb. bot.	lb.	3.00	4.00
Phenylethyl Alcohol, 1 lb. bot.	lb.	4.50	6.50
Rhodinol	lb.	6.00	8.00
Safron	lb.	.28	.30
Terpeneol, CP, 1,000 lb. drs.	lb.	.34	.36
Cans	lb.	.36	.38
Terpinyl Acetate, 25 lb. cans	lb.	.85	1.15
Thymol, U. S. P.	lb.	2.50	2.65
Vanillin, U. S. P.	lb.	6.25	7.00
Yara Yara	lb.	1.50	2.50

Miscellaneous

Insect Powder, bbls.	lb.	.47	.48
Concentrated Extract	gal.	2.75	3.00
Gums—			
Arabic, Amb. Sts.	lb.	.11	.12
White, powdered	lb.	.18	.20
Karaya	lb.	.12	.16
Tragacanth, Aleppo, No. 1	lb.	1.55	1.65
Sorts	lb.	.50	.60
Turkish, No. 1	lb.	1.20	1.30
Waxes—			
Bayberry, bgs.	lb.	.32	.34
Bees, white	lb.	.50	.52
African, bgs.	lb.	.36	.38
Refined, yel.	lb.	.41	.42
Candelilla, bgs.	lb.	.23	.25
Carnauba, No. 1	lb.	.46	.48
No. 2, Yel.	lb.	.40	.42
No. 3, Chalky	lb.	.26	.28
Japan, cases	lb.	.18	.19
Paraffin, ref. 125-130	lb.	.05	.06
Pine Oil, stm. dist.	gal.	.66	.67
Tar Oil, bbls. dist.	gal.	.50	.55
Commercial grade	gal.	.32	.40

Can you use a drum of

TERPINEOL, C. P.?

If you can bulk your purchases to
a full drum (approx. 429 lbs.)
we can save you some money on this

popular and inexpensive odor for
SOAPS, SPRAYS, DEODORANTS, etc.

Made by one of the oldest German manufacturers of chemicals

Schering-Kahlbaum, A.G., Berlin

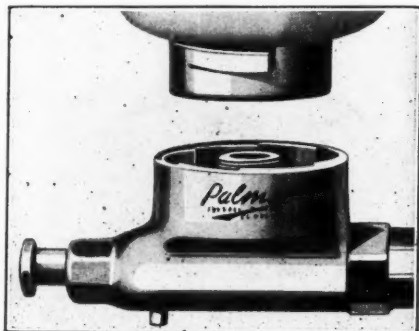
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Stocks carried in New York.

Liquid Soap Dispensers with a New Bowl Replacement Feature

Broken bowls easily replaced without cement, or sending the parts to the factory. Brackets need not be taken from wall.



Bowls are as securely attached to bracket as if cemented and cannot be removed unless broken.

The New Palmer "Letter Series" Line
A Style for Every Requirement — Fully Guaranteed.

Write for Descriptive Literature.

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Reduce Your Overhead by letting us Manufacture your Soap Products

By placing at your service—as though it were your own—our manufacturing equipment and facilities for making, packaging, warehousing and shipping, the management of your business is wholly relieved of production and physical distribution problems.

We have no products of our own. We specialize in special formula manufacturing for others. Our stock-in-trade is our record for increasing profit volume by cutting manufacturing overhead for proprietors of nationally advertised preparations. This record we jealously guard by unswerving square dealing. Absolutely no obligation, when you inquire what we can do for you. Write us.

Strong Cobb Company, Inc.

Pharmaceutical
Chemists since 1833
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Say you saw it in SOAP!

A Few

STRONG COBB

Soap Specialties:—

Auto Soaps, Cleansing Compounds, Disinfectants, Deodorants, Fly Sprays, Insecticides (Dry), Liquid Soaps, Mechanic's Hand Soaps, Medicinal Soaps, Polishes, Shampoos, Shaving Creams; Toilet Articles, such as Lotions, Mouth Washes, Powdered Toilet Soaps, Bath Soaps, etc.; Tooth Soaps, Pastes, Powders, ETC.

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We can make it!

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Soaps in Textile Processing

(From Page 31)

WATERPROOFING of fabrics is an interesting example of the use of special types of soap. Insoluble soaps such as those of calcium, magnesium, barium and zinc are used, but those most often applied are aluminum soaps. The fabric may be soaked first in a bath of a soluble soap, then squeezed in an alum bath. The aluminum soap is precipitated in the fabric. Soaps of carnaubic acid are very stable, and make excellent waterproofers.

Another method consists of soaking first in a solution of aluminum acetate, or a basic aluminum acetate. The goods are then worked in a bath of soap, dried and calendered, that is, pressed between rollers. The aluminum soap produced by the reaction is melted and distributed evenly throughout the fabric. There are many patented processes, such as the Tate electrolytic process, which uses sodium oleate and aluminum acetate.

Another extensive use of soaps is in the fulling and felting of wool. Fulling is a process by which the fibres making up a fabric are subjected to intermittent working until the cloth becomes firmer and thicker, and the individual fibres are no longer distinctly noticeable. Felting is similar except that it is applied to carded wool instead of to the woven fabric. The wool is stretched out and pressed. There it is thoroughly soaped, and subjected to working. The fibres go back to their original curly shape, and interlock with each other, and the goods gradually becomes shorter and thicker. In this sort of process soap is the ideal lubricant. It forms a uniform film which covers the fibres.

In fulling and felting, a soap must be used which will maintain a proper viscosity at the working temperature without lathering. It must be free from free fat or free alkali, which might affect the dyes in the material, and it must be readily soluble, so that it may be removed after the fulling. It must leave no objectionable odor. Soft soap made from olive oil is very good. Tallow and palm oil soaps may be used, but not alone, because they are not sufficiently soluble. Coconut and palm kernel oils make good white soaps for this purpose, but sometimes become rancid. When used in conjunction with tallow soaps they help make the latter more soluble. Cotton seed oil soaps must be avoided, because they leave a disagreeable odor and may affect the coloring of the goods. For a quick, light shrinkage, sodium soaps are used; for a heavy shrinkage, potassium soaps.



From the Oldest and Largest Lanoline Manufacturers Comes "Golden Fleece" Lanoline, U.S.P.



unexcelled as a base for
shaving soaps and fine
toilet soaps and creams.

It is unexcelled because of the years of research and experiment behind its manufacture. Unexcelled because the firm of Woll, Waescherei and Kaemmerei have spared no effort in perfecting this well known base and raising it to its present high standard of quality.

"Golden Fleece" Lanoline, extremely fine textured and practically odorless, is a U. S. P. product. Absolute neutrality is fully guaranteed. Where a particularly high quality of soap is required, "Golden Fleece" lends that "super cream" quality of cleansing and healing demanded so much by to-day's user of toilet soaps.

Obtainable in all packings, drums and barrels. Hydrous and anhydrous. We shall be glad to send you a sample to confirm our contentions.

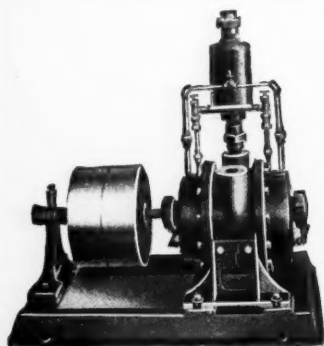
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Type "D"—Belt-driven

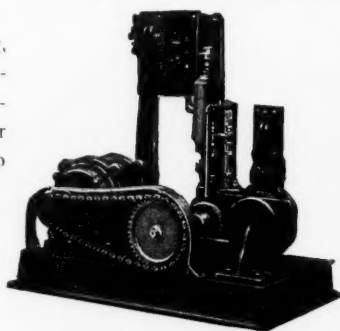
Rotary Air Compressors Vacuum Pumps and Positive Pressure Blowers

For agitating, mixing, pumping, spray processes, etc., with compressed air, and also for vacuum in the soap plant.

The users of CROWELL machines have been their best salesmen for over forty years.

Efficiency, durability and workmanship—this has always been the CROWELL standard.

Made in ten standard sizes—2 to 400 cu. ft. per minute.



Type "D"—with Motor Drive and Automatic Control

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"WESTEREGELN" Caustic Potash

Manufactured by
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Say you saw it in SOAP!

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New Patents

(Continued from Page 57)

signor by direct and mesne assignments to Darlo Company of Boston, Mass. The combination with a valve casing, of a soap container detachably carried thereby, the casing having integrally formed therewith a closure for the container and a laterally projecting portion provided with an always open, substantially straight main passage for the direct flow of a stream of water from a faucet to a hose with provision for direct engagement with the annular end of the faucet at the inlet end of said passage and for engagement with the hose at the outlet.

No. 1,682,120, SCRUBBER SOAP, Patented August 28, 1928 by Crosby Field of Brooklyn, New York, assignor to Brillo Manufacturing Company, Inc., New York. An article of manufacture, comprising a cake of soap having embedded therein a mass of thin, flexible ribbons of relatively soft tinsel-like metal.

No. 1,682,117, SOAPING AND CLEANING DEVICE, Patented August 28, 1928 by Crosby Field of Brooklyn, New York, assignor to Brillo Manufacturing Company, Inc., New York. A cleaning device, comprising an open ended tube of metal fabric, a solid back-

ing therein, the ends of said tube being folded over said backing toward each other, and means fastening the ends to each other to secure the solid backing therein.

No. 1,682,118, CLEANING DEVICE, Patented August 28, 1928 by Crosby Field of Brooklyn, New York, assignor to Brillo Manufacturing Company, Inc., New York. A cleaning pad, including a rectangular cake of soap having metal cushioning means on one face thereof the aforesaid parts being enclosed in a wrapper formed of knitted metallic ribbon.

National Association of Retail Druggists held their thirtieth annual meeting, Sept. 10-14, at the Whitcomb Hotel, San Francisco. Among the manufacturers who exhibited their products in connection with the convention were Colgate & Co., Kolynos Co., Pepsodent Co., Plough Chemical Co., E. R. Squibb & Sons and J. B. Williams Co.

A certain soap was recently described, by the city analyst for Birmingham, England, as being "a good example of water being made to stand alone," according to a note in the *British Soap Manufacturer*. Upon analyzing the product in question, it was found to contain 61.4 per cent water.

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Buy Direct and Save!

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SILICA SMOKE (Soft)

*for Nail Polish, Tooth Paste,
Gold—Silver—Glass Polish.*

TRIPOLI (Velveteen Brand)

*for Textile Soaps, Laundry
Soaps, Cleaning Compounds
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for Scouring Soap and Powders.

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OIL OF BERGAMOT ~ VILARDI

A MANUFACTURER buying this brand is assured of securing an oil from the most important and reliable source of supply. It assures the user of obtaining absolutely satisfactory results—

Ask us for a sample and be convinced that the

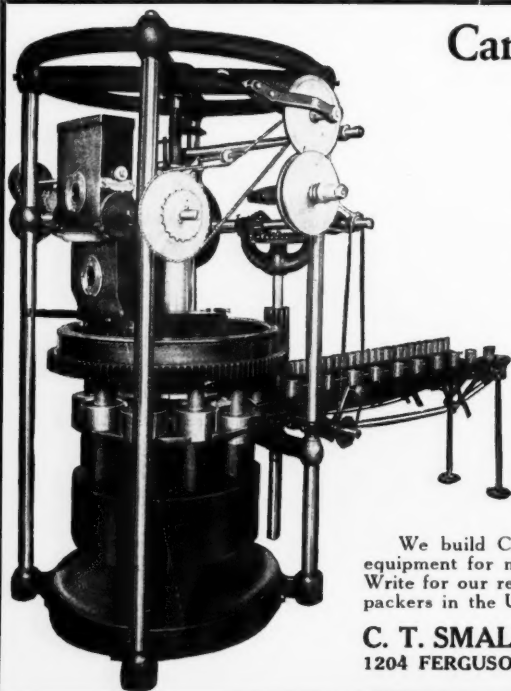
OIL OF BERGAMOT
supplied by the
HOUSE OF VILARDI
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Can and Package Filler

Automatic

Description—Fills Soap Powder Cleansers, Insecticides, Soap Paste, etc. Takes square or round cans when fitted with proper attachments.

Range—Adapted to cartons and bags and tin or paper cans from 1" high, 1" dia. to 10" high, 6" dia.

Equipment—Equipped for one size of package only, extra attachments furnished as required. Can be adapted to fill paste, powder or chip soap.

Speed—100 or more cans per minute, depending on size of can and nature of product. Will pack materials as tight or loose as desired.

Guarantee—Will fill 98% of all good containers with mean variation of $\frac{1}{8}$ ounce per pound or less.

Horse Power—2 Horse Power, 240 r.p.m. belt or motor driven as required.

**Do it automatically - Increase production
 Cut overhead - Reduce labor cost**

We build Cappers, Sealers, Tube Winders, furnish all equipment for making tin and paper cans, cartons or bags. Write for our references. They include many of the largest packers in the United States.

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Say you saw it in SOAP!

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Trade Marks Granted

(Continued From Page 57)

245,426—Shampoos. Oswald Leuschner, Astoria, N. Y. Filed March 17, 1928. Serial No. 263,323. Published May 22, 1928.

245,471—Furniture polish. The Globe-Wernicke Co., Norwood, Ohio. Filed January 23, 1928. Serial No. 260,499. Published May 29, 1928.

245,490—Tooth paste. McKesson & Robbins, Incorporated, Bridgeport, Conn. Filed April 6, 1928. Serial No. 264,459. Published May 29, 1928.

245,554—Insecticide. Michelangelo Paccella, M.D., Chicago, Ill. Filed December 12, 1927. Serial No. 258,827. Published May 29, 1928.

245,643—Polish. Charles H. Schulman, Brooklyn, N. Y. Filed March 28, 1928. Serial No. 263,898. Published June 12, 1928.

245,670—Silver polish. Service Products, Incorporated, Greenville, Pa. Filed April 14, 1928. Serial No. 264,848. Published June 12, 1928.

245,703—Soaps. George W. Marsh, St. Louis, Mo. Filed April 23, 1928. Serial No. 265,280. Published June 12, 1928.

245,706—Shaving soap. McKesson & Robbins, Incorporated, Bridgeport, Conn. Filed April 21, 1928. Serial No. 265,228. Published June 12, 1928.

245,727—Toilet soap. Charles A. Crary, Cincinnati, Ohio. Filed April 5, 1928. Serial No. 264,359. Published June 12, 1928.

245,741—Toilet soap, laundry soap, soap chips, soap powder, scouring soap, polish. Service Grocer Company, Inc., Detroit, Mich. Filed April 11, 1928. Serial No. 264,703. Published June 12, 1928.

245,861—Polishing compounds. Stewart-Warner Speedometer Corporation, Chicago, Ill. Filed January 25, 1928. Serial No. 260,660. Published June 5, 1928.

245,894—Deodorant in crystal form. Hill-yard Chemical Company, St. Joseph, Mo. Filed December 5, 1927. Serial No. 258,469. Published June 5, 1928.

245,911—Tooth paste. McKesson & Robbins, Incorporated, Bridgeport, Conn. Filed March 29, 1928. Serial No. 263,962. Published June 12, 1928.

245,912—Moth and Larvae Killer. The Expello Corporation, Dover, N. H. Filed March 29, 1928. Serial No. 263,938. Published June 12, 1928.

245,917—Insecticide. Providence Chemical Laboratories, Providence, R. I. Filed

(Continued on Page 111)

We make a
SPECIALTY
of these
SOAPS

**LIQUID SHAMPOO
SHAMPOO BASE SOAP
SHAMPOO PASTE
LIQUID TOILET SOAP
TOILET BASE SOAP
SURGICAL GREEN SOAP**

In addition to the soaps listed above we make many other kinds—all under laboratory control.

An exacting chemical analysis insures the uniform composition of these soaps.

We will gladly send you samples and prices on any soaps in which you are interested.

The
DAVIES-YOUNG SOAP CO.
Dayton, Ohio.

Have you ever considered the
"Abrasive Action" of your
DECOLORIZING CARBONS?

(A most important matter!)

Almost any kind of solid matter, suspended in liquid, will wear away the moving parts of pumps, etc. The RAPIDITY and the EXTENT of this action depends, in large measure, upon the NATURE of the solid material — in this instance the "carbon."

PURIT carbons, though HIGH IN DENSITY (easy filtering) are LOW IN ASH and correspondingly LOW IN ABRASIVE ACTION.

Think it over well!

**SPECIFY
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 FOR BEST RESULTS!**

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Decolorizing Carbons

Manufactured by
THE PURIT COMPANY
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*(Makers of Highest Quality
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are made in various grades, for different kinds of OILS and FATS, GLYCERINE and many other materials. Each grade is of UNIFORM QUALITY and is FITTED for the special work it is to perform —and the PRICE is RIGHT.

Full Information from
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You can't "go wrong" with PURIT!

SOAP SPECIALISTS

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Toilet Soap

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We have been manufacturing private brand soaps for the past forty years. Your soap problems and inquiries are solicited.

**TEELE SOAP
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CAMBRIDGE, MASS.

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INSECTICIDE AND DISINFECTANT SECTION

Official Publication of *The Insecticide and Disinfectant Manufacturers Association*.
Harry W. Cole, Holbrook, Mass., Secretary.

The Annual Meeting

THE Fifteenth Annual Meeting of the *Insecticide & Disinfectant Manufacturers Association* will be held in New York along about the middle of December. During the fifteen years which the Association has existed its career has been a varied one. It has ridden the crest and dropped to the valleys. It has been alternately successful and unsuccessful, seeing its membership at one time dwindle to a mere handful. Through its greatest difficulties, one or two men long associated with the organization stuck to their guns and carried the association through when it might have died had they been willing to let it die. After fifteen years of ups and downs, the Association finds itself to-day in the strongest position in its history, in prestige, membership and finances. Its membership is double that of its largest number prior to a few years ago.

During the same fifteen years, we have seen great changes in the disinfectant and insecticide industries. Much that was rotten and crooked in disinfectant manufacture and sales then, has been eliminated. The plane of the business has been raised to a remarkable extent. Where it was generally known as a "dirty" business then, it has to a great extent improved its ways and lived this reputation down. As for household insecticides, the business in its present form really did not exist at all fifteen years ago. Household insecticides then were of such minor consideration that they hardly constituted an industry. Today, everybody knows what liquid insecticides have done for the industry, and that it is likely to grow far beyond its present proportions. As a result, the insecticide membership of the Association which years ago was insignificant, has become important and active today, and accounts to a great extent for the growth of the Association.

The Association has been directly connected with the advancement of its indus-

tries during recent years. Its activities have been centered in eliminating bad practices within the industries, practices which might seriously jeopardize the businesses of all manufacturers, and in building up the consumption of all products of the insecticide and disinfectant industries. The Association is working for every manufacturer in the business and as a consequence, every manufacturer has a direct interest in the affairs of the Association, whether he is a member or not.

The fifteenth annual meeting will undoubtedly be open to those manufacturers outside of the Association who may wish to attend. The discussions and personal contacts should be extremely valuable. A manufacturer who has not attended a meeting during the past three years, cannot appreciate the increased importance of his own industry until he sits in at one of the present-day meetings of the Association. The annual meeting is one of those rare opportunities to meet everybody else at the same place at the same time. The membership is urged to prepare now to be in New York, Dec. 10, 11 and 12. As in past years, there will be a hearty welcome for non-members who attend.

A new retail drug chain, to be the third largest in the United States, is now being organized by a New York banking house. The chain will have 150 stores all in New York City and near-by territory, and will do an estimated business of eight to ten million yearly. Options on 180 established drug stores are reported held by the bankers. Temporary offices of the new chain are located at 41 Barclay St., New York.

A mixture of one ounce of pennyroyal to each pint of linseed oil and applied to horses, cattle, etc. lightly with a sponge, is reported from England to be an effective repellant for flies and other insects.

Notes of the Industry

Cleanwell Products Co., 211 Market St., St. Louis, has been formed by Robert Wesner and associates, to make soaps, disinfectants and related products.

Larvex Corp., New York, makers of "Larvex," a moth insecticide, have been successful in preventing the registration of "Larvatox," as a trade name for an insecticide to be produced by Peter G. Walter, Pittsburgh.

Bauer & Black, Chicago, have been purchased by the Kendall Co., Boston, makers of hospital supplies.

Plough Chemical Co., Memphis, Tenn., manufacturers of a spray insecticide, medicines, etc., are building a new factory and office. When it is completed all of the firm's activities, now carried on in five different buildings, will be housed under one roof. The machinery in the new plant will be thoroughly modern throughout. An attractive landscaping plan will serve as an unusual setting for a structure quite out of the ordinary as average industrial buildings go.

John H. Wright of Zonite Products Co., New York, has assigned U. S. Patent No. 1,676,309 covering an antiseptic to this company. The product is described as a stable preparation made from the sodium salt of orthodichlor sulfonamide of benzoic acid, potassium stearate, free stearic acid, water, eucalyptol, bornyl acetate and menthol.

C. P. McCormick of McCormick & Co., Baltimore, was recently elected president of the Baltimore Export Managers' Club.

Sir William Alexander, president of American-British Chemical Supplies, New York and London, producers and importers of cresylic acid and cresols, arrived in New York Oct. 15 for a visit to the American offices of the company.

Sanitary Supplies Co., 6744 N. Broad St., Philadelphia, will soon start to manufacture a line of deodorizing block holders. For several years the company has been making "Non-Pa-

reil" drip machines and sifter top cans, which have been marketed through the trade. The deodorizing block holders will be sold in the same manner.

A. C. Taylor, proprietor of the Taylor Chemical Co., Woburn, Mass., disinfectant manufacturers, has discontinued the business and has moved his residence to California. He expects to organize a similar business there, after having definitely settled.

W. L. Filmer, for a number of years representative of the Monsanto Chemical Works in the Chicago district, and manager of the Chicago branch, resigned October 1. He will continue to work with Monsanto as consultant and special representative. Frank T. Robinson, who has been connected with the Chicago office for the past year, will become Chicago manager, and will be assisted by F. C. Renner, who has been transferred from the St. Louis office.

McCormick & Co., Baltimore, are in third place in the Baltimore drug bowling league, according to the latest team standings. Their bowling representatives have won five games and lost four.

N. S. Greensfelder, advertising manager of the Hercules Powder Co., Wilmington, Del., pine oil and rosin producers, who is head of the National Industrial Advertisers Association, spoke before the industrial section of the Direct Mail Advertising Association's recent annual meeting on "How Analysis Helped to Solve the Advertising Problem of Marketing Turpentine."

Spray insecticides are finding a good market in Angola, according to a recent Consul report, owing to the Government's recently adopted sanitary measures. Although imports were relatively small, in 1926, the last year for which figures are available, consisting of \$6,000 worth of sprays, mostly of American origin, a steady increase in purchases is looked for. The duty amounts to 15 per cent ad valorem.

A fluorine moth proofing claim, contained in a patent sought by Ernst Meckbach, has been allowed by the Board of Appeals, following its rejection by the patent office examiner, with the stipulation that the impregnation must not wash out and lose its efficiency as in other processes.

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Testing Liquid Insecticides

Description of Methods and Equipment Used, and Means of Breeding Various Insects for the Tests

By C. H. PEET AND A. G. GRADY

Rohm & Haas Research Laboratories

(Continued from September issue)

TO INSURE a large supply of adults, four cultures were started every other day. About five or six hundred eggs and larvae, obtained as above, were transferred to each of the four rearing jars. Each jar was filled to about the three-fourths mark with fresh, loosely packed horse manure. It was found that if about 200 cc. of water were added to the manure when the culture was started, it was sufficient to keep the medium in a moist condition until the adults emerged. The losses resulting from larvae drowning were insignificant. To this 75 cc. of the supplementary food, yeast cells suspended in water, was added and about 10 cc. more was dropped in the jars every other day until the larvae were about ready to pupate. The amount of yeast to be fed varies, of course, with the number of larvae to be reared. It was found that in this case if the amount of yeast suspension was cut down the adults, if they emerged, were apt to be stunted and possess little vitality. In making up the yeast suspension, Glaser advises, "In practice, we dissolve a one-pound bakery cake of commercial yeast in two liters of water. The suspension of yeast cells is then distributed in pint bottles and autoclaved, to kill fungi which often cause trouble, and stored on ice." We have found that if one pound of yeast is dissolved in two and one-half or three liters of water, very good results can be obtained. At first, the yeast suspension was autoclaved using pint milk bottles as receptacles. A *pyrex* flask was later substituted for the milk bottles as these are apt to crack when subjected to high temperatures a few times. A number of cultures were reared using yeast suspension which was not autoclaved. While this part of the technic may be left out, with little or no difference in the results, it is advisable to sterilize the yeast suspension if an autoclave is available. The horse manure containing eggs and larvae was then emptied onto the fresh medium, the covers fitted on the jars and the culture was incubated at 30° C. The larval medium settled in a few days to about the middle of the jar which gave the adults plenty of room to move about when they emerged.

At this temperature the time required from egg to adult was approximately eleven days. As the eggs were oviposited over a period of two days in the breeding cages some of the adults emerged nine days after being placed in the rearing jars and the rest within eleven days, other conditions remaining equal. As the flies emerged, they were taken out of the jar in the following manner: The cork plug was removed from the top of the rearing jar and a wide mouthed bottle placed over the exit hole. The jar was then darkened, except around the exit hole, with a cloth cover. As house flies are positively phototropic, most of them will come out into the bottle in a few minutes. The flies

were then either placed in a stock cage to be held for insecticidal tests or used for breeding purposes. It is advisable to take the flies out of the rearing jars soon after they emerge so as to avoid overcrowding. When large numbers of adults are allowed to stay in the rearing jars they are apt to become excited and mill about the top of the jars in an effort to escape. This often results in a high mortality.

To draw any conclusions from insecticidal tests which would shed light on the toxicity of a compound the age and the condition of the insects used should be known. This appears to be particularly true of flies. We have found that the adult house fly bred under artificial conditions during the winter months is most active and resistant when it is four or five days old. In comparing results of insecticidal tests run during the summer with wild flies and those reared artificially, it developed that winter flies, four or five days old, were more uniformly resistant to toxic compounds than wild summer flies and fully as resistant as controlled cultures developed during the summer. As the age of the flies was of great importance, they were kept in separate cages dependent on the date they emerged.

After the fifth day, flies which had not been used for insecticidal tests or transferred to the breeding cages were killed. The cage was then thoroughly washed with soap and water and dried. As the adults were continually emerging in the rearing jars it was necessary to use the cage immediately for a new supply. In this way, a continuous cycle was maintained with a minimum number of cages.

When flies were needed for insecticidal tests, they were removed by the exit-hole and bottle method described above. The approximate number desired were collected in a few moments. As a matter of precaution, it is advisable to darken the cage gradually as the flies are easily excited and may injure themselves mechanically if suddenly aroused.

Observations: A few observations on the activity and longevity of the adults during the winter months were made. It was found that the adult fly was very active and resistant until about the eighth day after it emerged, reaching what might be called its peak of activity and resistance about the fifth day. The longevity of the adult varied from two to thirty-three days with an arithmetical mean of thirteen plus days. It was also noted that the ovaries and testes developed rapidly and in some cases eggs were oviposited by flies in a little over three days after the time of emergence. Some investigators (Howard, House Flies, U. S. Dept. Agri. Farmers Bulletin, 679, 1915; and Glaser, Rearing Flies for Exp. Purposes with Biological Notes, *J. Econ. Ent.* 1924, XVII, 486-496) have reported that the life of the adult house fly, reared during the warmer seasons, averages

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approximately twenty days and that the time required for the development of the ovaries and tests was longer by several days than observed in this case. Whether this comparatively short life cycle and rapid development was due to the fact that the flies were continually subject to a constant temperature of 30° C., a special diet, absence of direct sunlight, or to other factors was not determined.

During the spring, summer and early fall the flies were reared in a part of a greenhouse which had been partitioned off. The same technic was employed as described in the preceding pages except that the supplementary food was not fed to the larvae. The cultures were transferred to the winter insectary toward the latter part of October. Of course, the time of transfer will depend on climatic conditions.

The writer takes this opportunity to express his indebtedness to Dr. W. S. Abbott of the Bureau of Entomology and to Dr. R. W. Glaser of the Rockefeller Institute for Medical Research for the valuable suggestions embodied in his papers and for his personal assistance.

Summary: A convenient insectary and cages and simple methods are described for breeding large numbers of house flies during the winter. A few observations on the activity and longevity of the adults are noted.

THE next paper is "Studies in Insecticidal Activity."

II. Direct contact sprays. The testing of insecticides which act by direct contact rather than by volatilization or by air float presents a special problem. The insecticide should be brought well in contact with the insect being tested, the viability of the insect should be definitely established, and the method of applying the insecticide should be quite strictly reproducible. The methods, which this paper advocates, involve testing the material under consideration in the form in which it would be applied in the household, namely, in oil solution and in a strictly inert carrier together with control tests to determine the normal mortality among unsprayed insects. To test an insecticide, you should test the finished product and then test the active principles in the carrier and then test the insect all by himself just to see whether he would die if left alone.

Insecticides of this type commonly do not have a very rapid action nor is rapidity of action required. The creatures against which they are used are generally creeping pests such as ants, roaches, millipedes, bedbugs, and various members of the coleoptera. Since it is, of course, impossible to test any given material against all the types of insect which it might destroy, the first step is the choice of a reference insect. This laboratory has found the common cockroach (*Blattella germanica*) and the ordinary leather beetle (*Dermestes vulpinus*) easily bred under artificial conditions and possessed of sufficiently short life cycles to serve as excellent test insects.

Testing the Finished Insecticide

THE test chamber employed consists of a box of wire gauze approximately 8 x 8 x 8 inches. It is made from a block of one inch pine to one edge of which are nailed two 1 x 1 inch uprights, eight inches long, connected by an eight inch crossbar. To each of the upper corners of the frame a thin oak strip, one inch wide, is nailed and bent in practically a quadrant until it meets

the base where it is attached. Grooves cut in the upright frame permit a plate of window glass to slide up and down and the rest of the box is covered with 16 mesh wire gauze. Such a chamber makes it possible to spray the insects contained in it from practically all directions and affords them practically no covered corners in which they can hide and avoid the spray. We had this trouble with some cages that we tried. The bugs would get into the corner and we would have a large number still alive because they hadn't been touched.

Because insects of this type are reared with difficulty in batches of uniform age, the method of probabilities is employed and from 50 to 100 insects of the kind being tested are transferred from the large breeding cage to each test cage. Five test cages are employed for each test, two of them are lethal chambers and three are check cages. One of the checks is a starvation cage in which from 50 to 100 insects are placed with no food; in the second, approximately the same number of insects is placed but an adequate supply of food is provided; in the third, about the same number of insects is introduced and these insects are used to test the toxicity of the carrier being employed.

Procedure: The same precautions with regard to fineness of spray, which have been emphasized in a preceding paper should be observed. The spray is directed upon the insects from every possible angle until each insect has been thoroughly wet all over. This is not, however, to be interpreted to mean that the insects are to be drenched to the point of drowning. The insects in the third check cage are then sprayed in the same manner with the hydrocarbon or other carrier alone. After spraying is complete the proper food (salmon, cheese or other protein material in the case of the dermestidae and bread and milk in the case of cockroaches) is put in each cage on a flat dish in order that the food may not absorb insecticide. For comparisons among the cages of any single test group, it is sufficient to have the series of cages being tested in the same room on the same bench. This gives sufficiently uniform external conditions. The uncertainty of obtaining insects of the same viability from week to week makes it preferable to run a fresh series of tests on any given compound when comparisons are desired. If, however, it is desired to compare one day's tests with another, it is essential that the test cages be kept in a room of uniform temperature. Such tests can be made by employing a room similar to the insectary described previously in this paper. It is obvious that the three check cages set up on any day may serve as controls for as large a series of test pairs as may be set up.

Interpretation: If C is taken as the per cent of insects living in the feeding control cage and T is the percentage alive in the test cages, then

$$100 \frac{C-T}{C} = I,$$

the insecticidal coefficient of the finished insecticide, and the lower the coefficient, the less effective the insecticide. To obtain the insecticidal coefficient of the insecticidal principle apart from its carrier, the equation is modified to

$$100 \frac{S-T}{S} = I_p$$

in which S is the per cent alive in the carrier con-

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tol cage, Ip the insecticidal coefficient of the insecticidal principle, and T is again the percentage living in the test cages. (W. S. Abbott, Julian J. Culver, and W. J. Morgan, Dept. of Agr. Bulletin No. 1371, pg. 6.)

One method of arriving at the insecticidal value of a given compound has been outlined just above. Two others are possible:

(1) If the material being tested is a liquid it can be emulsified in water and this emulsion can be sprayed exactly as described under procedure. Such emulsions are difficult to make with water alone as the dispersing medium, so it is commonly better practice to employ an emulsifying agent. For this purpose, soap solutions have proven very generally satisfactory. In such a case, however, the insecticidal action of the soap must be taken into consideration and evaluated as hereinbefore described. Tests in this laboratory indicate that saponin is a more satisfactory emulsifying agent for tests in that its effect upon insects is practically negligible. Its chemical inertness is also a desirable feature in the case of compounds possessing alkali sensitive groups. The only accessory or synergistic component in this case is water.

(2) For compounds which are solid or which it may be preferable to apply in powder form a different procedure is necessary. Two general methods are suggested. A group of insects (and the number should not be too small) may be placed in a can and sprinkled with the powder until enough powder is spread over the bottom of the can to make it possible to give each insect a thin coat of the powder by shaking the can about. This method insures a fair test of the insecticide but does not in any way approximate the conditions under which the insecticide is normally employed. It is the opinion of these laboratories that tests should be designed to approximate more closely the conditions under which the ultimate consumer applies the insecticide. Accordingly, the methods which have been followed here have been somewhat more rigorous.

IF THE insecticidal powder is designed to be sprayed or blown upon the insect, the insects are placed in the opening of a V-shaped runway which has a trap at the narrow end and the powder being tested is blown against them. They are then carefully brushed into the trap and the time required for the insecticide to produce death is observed. At the end of twenty-four and forty-eight hours the number of insects still left is counted and the efficiency of the insecticide at the expiration of these periods is calculated by the application of the formula developed above. For this test, if a diluent is employed, a check test on the diluent is also made under similar conditions to the test proper. Of course feeding and starvation checks must also be run in connection with these tests or the equation is not applicable.

If the insecticide is designed to be spread in cracks or across runways, a method has been developed which closely approximates the conditions existing in actual use. A six inch square of one inch pine is enclosed at a distance of six inches by a retaining wall of one-inch strips. The bottom of the moat thus formed between the island in the center and these retaining strips is covered with a layer of the insecticide to be tested. Insects are then liberated on the island a few at a time and lured across the moat where they are captured and placed in small cages. These caged insects are

counted at the end of twenty-four and forty-eight hours and the insecticidal coefficient is calculated as above. In conclusion, it must be noted that the number of insects employed in each test must not drop below the minimum of about fifty for, as we have pointed out in previous papers, the dependability of a biological test is always closely related to the number of tests run.

Breeding Leather Beetles

THE next paper is "Studies in Breeding Insects throughout the Year for Insecticide Tests." II. Leather Beetle (*Dermestes Vulpinus Fab.*) The bug that we have used principally in testing contact sprays and testing powder insecticides, etc., has been the creature that is technically known as the *Dermestes Vulpinus Fab.*, the little bacon beetle or leather beetle.

The value of having on hand an adequate supply of suitable insects for insecticidal experiments throughout the year instead of during their natural occurrence is, of course, fully realized. It is not only desirable to obtain and rear, throughout the year, insects that are prolific, can be easily handled and have comparatively short life cycles, but it is also of importance that these particular animals should be as resistant, or more so, to toxic compounds as insects found in the household and those of economic importance to agriculture.

A search was made for an insect that would meet the above requirements and after considerable investigation it was decided that the leather beetle (*Dermestes Vulpinus Fab.*) would serve very well as a standard insect for biological experiments. This paper gives a short description of the biology of *D. vulpinus*, the technic employed in rearing large numbers throughout the year and its value as an experimental insect for biological tests.

Biology: As *Dermestes Vulpinus* is of comparatively little economic importance very little reference is made to its biology in the literature. Riley in one of his reports (1885—Riley, C. V. - Rept. Comm. Agric. U. S. 258-264 "The Leather Beetle or Toothed Dermestes") gives an account of this insect as a destroyer of leather goods and Illingworth (Illingworth, J. F.—"The Leather Beetle a troublesome Pest of Dried Fish in Hawaii." Pro. Haw. Ent. Soc. III, No. 5, April, 1918.) has made a complete study of its biology and has written on its destructive habits as a pest to the fishing industry in Hawaii. It was necessary, of course, to make a complete study of this insect if it was to be used as a standard insect for insecticidal tests. The following notes on the biology of *Dermestes vulpinus* were made during the winter at a temperature of about 23° C. and the relative humidity at about forty per cent. A short description is also given.

The time required from egg to adult at the above temperature was about fifty-five days. The eggs, which are about 2 mm. in length, of a creamy-white color and cylindrical in shape, hatch in three or four days. The larvae upon hatching are about 2 mm. long attaining a length of about 12 mm. before pupating. The dorsal surface is covered with a complex clothing of hairs and is of a dirty brown color. The larvae are very active and are voracious eaters. The number of times the larvae moult varies but in the course of their development, the average is seven. We have observed some larvae shed their skins ten or eleven times during their development presumably be-

(Continued on Page 117)

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Annual Meeting Dec. 10, 11, 12, in New York

Insecticide & Disinfectant Manufacturers Association To Hold 15th Annual Convention — Hotel Undecided



THE Fifteenth Annual Meeting of the Insecticide & Disinfectant Manufacturers Association will be held in New York on December 10, 11, 12, the Monday, Tuesday and Wednesday of the second week of the month, in accordance with the by-laws of the organization. These dates were announced Oct. 6, by President H. W. Hamilton after a conference with the Board of Governors. The hotel at which headquarters will be established and meetings held, has not as yet been decided upon, but will be announced in the near future.

Sessions will undoubtedly be divided up after the plan used last year which was such a success. The first day of the meeting will be given over to committee reports and discussion of general problems. The second day will be split up into two special sessions, one of which will discuss and deal with problems arising strictly in the household insecticide business, and the other will be given over to disinfectants, liquid soaps, and allied products. At the 1927 meeting in New York, this plan was followed and both sessions were attended by practically the entire membership at the convention. The third day will be taken up with addresses by various Government authorities and other speakers on both technical and business subjects. The annual banquet will probably be held on Tuesday evening, as in past years, although the plans have not yet been made.

In connection with the annual convention this year, a somewhat enlarged exhibition of products, raw materials, containers, equipment, etc., is being planned. An annual exhibit was held for the first time last year and was quite successful. This year, the plans call for a more elaborate exhibit, larger space, and a nominal charge to members for exhibiting. A standard size exhibit space this year will cost twenty-five dollars to members and associate members, and will be open to non-members at seventy-five dollars per space. Details of the exhibit of products are being worked out. The matter has been turned over to the publicity committee by President Hamilton. Details regarding the exhibits will be available about Nov. 1. Inquiries for information

should be directed to Publicity Committee, Insecticide & Disinfectant Manufacturers Association, Holbrook, Mass.

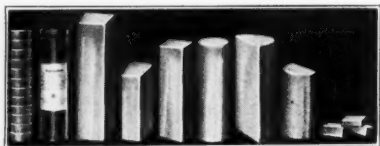
A meeting of the Board of Governors of the Association will be held in New York in a few days and details of the meeting will be arranged, including selection of the hotel. The Association has held its annual meeting in New York at the same hotel for the past fourteen years, but there is discussion of a change this year.

Insecticides and Disinfectants in Italy

Italy offers a rapidly growing market for the sale of insecticides and disinfectants. Unfortunately, no Italian statistics are available covering imports of these materials, and it is, therefore, impossible, to show the extent of this expansion. However, proof that the market is a growing one is evidenced by the fact that United States exports to Italy increased sharply from 1926 to 1927. Until quite recently, liquid insecticides were practically unknown in Italy, but during the last two summers, liquid insect killers and hand sprays were to be found in most of the better class stores handling that type of product in the larger cities. Exports of household insecticides and disinfectants from the United States to Italy rose from an unimportant amount in 1926 to 862,293 pounds, valued at \$189,461, in 1927.

The long, hot Italian summers are conducive to the breeding of insect pests. Flies, bedbugs, roaches, and mosquitoes are especially prevalent throughout southern Italy, where the winters are never cold enough to kill off these pests in any numbers. The extensive coast line of Italy and the malarial swamps of the central provinces provide excellent breeding places for mosquitoes. Flies and moths abound throughout the entire peninsula and fleas, which are particularly bad in the south, are found generally in railroad trains and other public places. The age of many of the buildings and their old-fashioned construction and lack of modern sanitation are all factors in the favor of a large insect population. The use of screens is rare, although mosquito netting is used liberally for curtaining beds. Strips of sticky fly paper are

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NIAGARA FALLS
New York

Say you saw it in SOAP!

sometimes suspended from the ceiling, but not to the same extent as in the United States.

The principal insecticide, of Italian make, appears to be a product manufactured at Milan and sold under the trade name of "Razzia." This insecticide is reported to be a mixture of chrysanthemum and pyrethrum powder. "Razzia," in tins of one kilo, retails for about \$1.27. The principal insect killers on the Italian market at the present time are American products of the spray variety. Several brands are represented and appear to be enjoying a good sale. These would offer the greatest competition to any new product entering that market. The sale of household preparations of this nature has received added impetus from the program of the present government to encourage order and cleanliness. At the present time the sale of such products is confined largely to the well-to-do-class and to the large foreign colonies, such as exist in many Italian cities, especially Florence and Rome. The average price of spray insecticides places them beyond the reach of the poorer class.

Probably the most satisfactory method of placing insecticides and disinfectants on the Italian market is through wholesalers or manufacturers' agents located in one of the larger commercial centers of northern Italy, such as

Genoa or Milan. Practically all manufactured articles of foreign origin are distributed throughout Italy by this method. Many of these firms are in a position to maintain stocks, handle the necessary commercial literature, quote prices and extend credit where advisable. Retailers are able to obtain prices on goods delivered in their city. The importing firms also maintain branches and traveling representatives who sell direct to the retailers, who are usually drug stores and general stores. Inasmuch as distances by rail are comparatively short in Italy, retailers do not have to carry large stocks.

The principal insecticides now on the Italian market are well advertised. The advertising media generally employed are placards, bill boards, daily newspapers, and street car advertising. Insecticides do not appear as a specific item in the Italian Customs Tariff. The duty on such products would doubtless be based upon the ingredients. The best method to ascertain the duty on any particular product would be to send a sample to the proper Italian customs authorities for analysis. A list of prospective dealers can be had from the Bureau of Foreign and Domestic Commerce, Washington, D. C.

Tested
BOTANICALLY

HOPKINS'

Tested
MICROSCOPICALLY

Trade YUNIFORM Mark

PYRETHRUM PRODUCTS

Made from ONLY ONE GRADE of flowers
Closed Dalmatian Insect Flowers
(*Chrysanthemum Pyrethrum Cinerariaefolium*)

**HOPKINS'
CONCENTRATED
PYRETHRUM
EXTRACT**

"Uniform in Strength"

**HOPKINS'
CROW BRAND
INSECT
POWDER**

J. L. HOPKINS & CO.
Since 1890

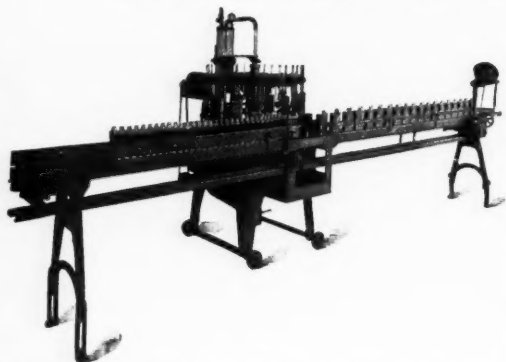
135 William St.
NEW YORK



Tested
CHEMICALLY

Tested
PHYSIOLOGICALLY

Insecticides-Liquids of All Kinds Filled Into Bottles and Small Cans



Production!—at lowest cost with a Kiefer Rotary Vacuum Filling Machine.

One inexperienced operator needed to feed bottles—discharge direct to cappers, corkers, etc.

Clean filling—no dripping onto bottles; no overfilling; no wiping of bottles.

Broken and imperfect bottles pass through machine and no liquid goes into them.

All metal contact; no rubber tubes to rot and cause trouble. Constant, uniform production.

The Kiefer Rotary Vacuum Filling Machine is made in four sizes. Write for catalog showing these and our semi-automatic machines.

THE KARL KIEFER MACHINE CO.

CINCINNATI, O.



LETHANE

PAT. APP. FOR

MAKES GOOD INSECTICIDES BETTER

NEVER VARIES—COSTS LESS
A KILLER—NOT JUST AN ANESTHETIC

*A synthetic product manufactured
entirely in our plant with a uniform-
ity which nature can never approach.*

LETHANE GIVES YOUR INSECTICIDE THE KNOCKOUT PUNCH

LET US PROVE IT

Office
222 W. WASHINGTON SQ.
PHILADELPHIA, PA.

Röhm & Haas Co., Inc.

Works
BRISTOL, PA. and
BRIDESBURG, PA.

Say you saw it in SOAP!



New offices of F. J. Stokes Machine Co., Philadelphia, builders of deodorizing block presses, percolators, etc., recently occupied. The new addition, attractively planned throughout, was built as an addition to the factory, which can be seen extending toward the rear.

The Japanese city governments encourage the summer campaign against flies through the purchase of dead ones, about fifty cents being paid for each thousand. This has a tendency to increase the use of household insecticides, the market for which is growing steadily, according to a recent Consul report. The fight on rats is carried on the year round, says the same report, poisons being the generally favored method of extermination. However, many persons prefer to catch the rats in traps, as the cities offer a bounty for each dead one delivered to the proper official.

R. C. White Sues Komo

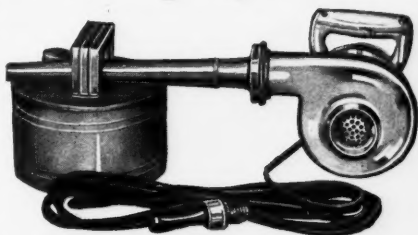
Robert C. White Co., Philadelphia, headed by Dr. Robert C. White, has entered suit against the Komo Chemical Co. of that city, manufacturers of "Komo," one of the first insecticide sprays on the American market, for damages growing out of breaking a sales contract with the White organization on Sept. 12. The contract which is reported to have had several years yet to run, provided for the sale of "Komo" through the Robert C. White Co. and has been in effect for several years past. In breaking the contract, no reasons are reported to have been given by the Komo Chemical Co. and until the answer to the White suit is filed, nothing in this connection will be known.

There is a good opportunity for the sale of ant poison in Spain, according to a recent Consul report, residents in the Galician section being troubled considerably by dark red insects, about one eighth inch long, formerly mostly found in Portugal. The report states that the ants are particularly interested in locating near human dwellings, which they then overrun, no way having as yet been found to keep them out.

Increase Your Insecticide Business with these *Electric* Sprayers

Hand spraying is too slow and laborious for modern industry and institutions. Offer them an up-to-date high speed electric sprayer, and you will get their business. Many leading manufacturers of industrial insecticides are finding the Tornado the biggest stimulant to sales that they have ever used!

The appeal of the electric sprayer brings in plenty of NEW business. And because the electric sprayer is so easy to use and gives such splendid results it makes old customers use more insecticide and consequently BUY more.



Breuer's Tornado Portable Electric Sprayers

are the most powerful and efficient of their type on the market. Handle all liquid insecticides, germicides, and disinfectants. Model 6 ball bearing $\frac{1}{4}$ H.P. G-E motor, is for heavy duty service in mills, warehouses, and larger institutions. Model 50, with $\frac{1}{8}$ H.P. G-E motor, is designed for smaller plants and institutions, as well as for home use.

Write today for complete description and full particulars



Mail the coupon today.

Please send full particulars on the Breuer Portable Tornado Electric Sprayer. No obligation.

BREUER ELECTRIC MFG. CO.,
860 Blackhawk St., Chicago, Ill.

Name

Address



SHAKER TOP CANS

*for paradichlorbenzene crystals
also Plain and Decorated*

TIN CANS

for Pastes, Soft Soaps, Dry and Liquid Insecticides

HOLDERS FOR

DEODORIZING BLOCKS

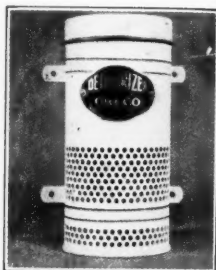
Write us about your requirements
and let us submit samples and prices.

WILLIAM VOGEL & BROS., INC.

37-47 So. 9th Street

Brooklyn, N. Y.

IN BUSINESS OVER FIFTY YEARS.



perfumes for

theatre sprays - deodorants
and liquid soaps!

A complete line of perfuming specialties originated
especially for use in this class of products including

**Violet - Rose - Cedar - Lilac
Corylopsis - Oriental
and many others**

These odors are fragrant, stand up perfectly
and will last. They are priced reasonably.

Samples and quotations on request.

Perhaps you may want to use an individual odor in your products—something that is not noticeable among competing sprays, deodorants, liquid soaps, etc. If so, tell us what type of

perfume you want and we will originate something for you—and if you approve the sample and adopt the odor your right to its exclusive use will be protected.

GEORGE V. GROSS COMPANY

30 Old Slip

New York

Say you saw it in SOAP!

Insecticides in the Straits

Insect destroyers find a ready market in the Penang area of the Straits Settlements, according to a recent Department of Commerce report, owing to the prevalence of mosquitoes, ants, moths, and roaches. Local dealers state that the many preparations of this nature now marketed in that district enjoy a fairly steady demand the year round, although no product seems to predominate. The majority of insect destroying preparations on the market is manufactured in Great Britain, Germany, France and the United States. Although a preference is shown for British goods and products, quality and price are important factors in effecting sales. One of the best-known insect killers retails at Penang at the following prices: Half-pint tins, \$0.90; pint tins, \$1.30; quart tins, \$2.25; gallon tins, \$7.00. The following table indicates the imports of disinfectants into all British Malaya during 1927:

COUNTRY OF ORIGIN	GALLONS	VALUE IN STRAITS DOLLARS
United Kingdom	147,777	\$238,607
British Possessions	2,168	6,731
Europe	77	380
United States	904	2,705
Other countries	90	162
Total	151,016	\$248,585

(One Straits dollar at par equals \$0.5687 United States currency).

The European population and the better class of Chinese and Eurasian residents constitute the chief users of these preparations. This means that in the city of Penang alone there are many thousands of prospective customers, while on the many malaria-infested plantations of the mainland there exists a further favorable market for insecticides.

One very important phase in commercial relations with the Straits Settlements, and upon which the business character of the American manufacturer is very critically judged by the local importer, is the necessity for employing expert methods in the packing and preparing of shipments of all kinds. Insecticides should be packed in well-sealed, thoroughly moisture-proof containers. The climate of Malaya is damp and tropical and every precaution must be taken to protect packing cases and crates from being broken open and otherwise damaged from possible exposure to sun and rain during their long ocean voyage. A list of possible dealers in insecticides in the Straits Settlements is available to properly accredited firms upon request to the Chemical Division, Department of Commerce.

Hy-Speed liquid handling equipment
will increase the efficiency of your
plant by doing more and better work.

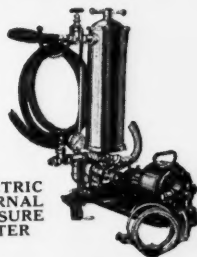
THREE LOW-PRICED MACHINES



Portable Electric
Mixers for Every
Job



Electric Filling Machines for
Bottles and Small Cans



ELECTRIC
INTERNAL
PRESSURE
FILTER

Write for Catalogue

ALSOP ENGINEERING COMPANY

Mfrs. of Portable Electric Mixers, Filters, Bottle-Fillers, Mixing Units, Pumps, Glass-Lined Tanks
47 WEST 63RD STREET Office and Showrooms NEW YORK CITY

CONCENTRATED Liquid Soaps

ZEF-IR
Blocs and Crystals

SCRUBBING
COMPOUNDS

LIQUID WAXES

INSECTICIDES
Dry or Liquid



LIQUID SOAPS and Dispensing Equipment for the Trade

HERE are products which sell better because they are better. Absolute uniformity, high quality—at prices which are right in line. These are products you can sell because of unusual merit, and on which you can build repeat orders.

Let Us Send You Samples and Quote Prices

Member



**The HUNTINGTON
LABORATORIES, Inc.**
Huntington-Indiana

Say You Saw It in SOAP!

THE average business house receives a great many inquiries for its products or services every year which cannot be attributed to any special source. A vast majority of these probably originate from some form of advertising but, due to the general tendency toward not mentioning the names of publications, cannot be directly traced.

A short time ago a manufacturer, using space in this magazine, received a number of inquiries during the week following publication. All were for a product which was advertised exclusively in SOAP. Not one of the letter-writers, however, mentioned SOAP, although all of them wrote because they saw the advertising in the magazine.

When you write to a manufacturer of raw materials or equipment, in response to advertising in this publication, say you saw it in SOAP. The advertiser will appreciate it—and so will we!

The Publishers

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I & D Exports Up 60% in July

Exports of insecticides, disinfectants, deodorants and related products were more than sixty per cent larger in July than in the preceding month, 1,918,655 pounds, worth \$449,373, having been shipped, as compared with 1,213,433 pounds, valued at \$267,210. Italy bought more American sanitary products than any other country, having taken close to 600,000 pounds, almost three times as much as in June, when the same country also led the field. Other large July buyers were France, 180,000 pounds, Cuba, 133,000 pounds, England and Colombia, 131,000 pounds each, and Mexico, 117,000 pounds.

Metal and stove polish exports amounted to 203,132 pounds, worth \$32,333, in July. Shoe polish shipments reached 282,784 pounds, valued at \$77,979, in the same month. Leather dressing and stain exports totaled 141,619 pounds, valued at \$29,451, with shipments of floor wax and wood, furniture and auto polishes at 219,577 pounds, worth \$55,457. The largest amounts of metal, stove and shoe polish, dressings and stains went to Canada, with England the leading buyer of floor wax and other polishes.

Salvador Insecticide Duties

Under the Salvadorean customs tariff, the following rates of duty are assessed on insecticides and disinfectants:

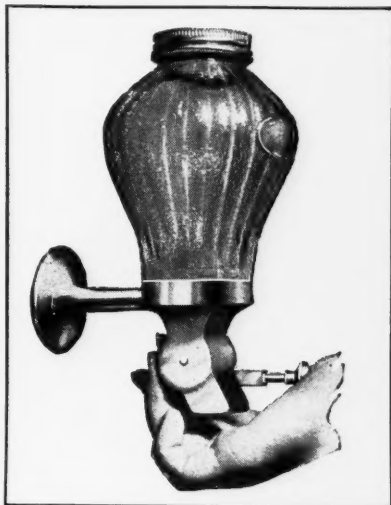
Cattle dips with arsenic base	\$1.50 per 100 gross kilos
Industrial insecticides in powder form	35.00 " " " "
Industrial insecticides in liquid form	18.50 " " " "

Various surcharges are included with the rate of duty. Since the duties are assessed on the gross weight of the shipment, it is important that the packing and containers should be as light as is consistent with the safety of the goods. A list of possible dealers in insecticides in Salvador is available to properly accredited firms upon request to the Bureau of Foreign and Domestic Commerce, Washington, D.C., or any branch office.

Raw chemical materials for use in the manufacture of non-alcoholic preparations for use in disinfecting, dipping and spraying may now be shipped into Canada duty free, according to a recent Government order, the act being retroactive to Feb. 17, 1928.

Sell more Powdered Soap

thru the use of this
efficient and attractive
Powdered Soap Dispenser



The J & W Powdered Soap Dispenser

This model dispenser is designed for use in the home, office, and factory. The beautiful art-glass bowl holds from 250 to 350 hand washes. The nickel-plated base contains five compartments, and each one holds just enough powdered soap to wash the hands. One push of the plunger discharges the contents of one compartment into the palm of the hand, and fills one at the same time. Inside the bowl is an agitator which keeps the soap in motion.

NEW MODEL NOW READY

Write for information, prices
and sample.

Bobrick Chemical Corporation
Established 1906

111-117 Garey Street
Los Angeles, Calif.

87 Fifth Avenue
New York City

NEW ODORS for SPRAYS and DISINFECTANTS

Spray Bouquet No. 1888	\$1.25 lb.
“ “ No. 1889	1.45 “
“ “ No. 1890	1.65 “

Powerful, Exceptionally Pleasant and Readily Soluble

NEW ODORS for PARADICHLORBENZENE

Para Bouquet No. 1891	\$1.75 lb.
“ “ No. 1892	2.25 “
“ “ No. 1893	2.75 “

Strong, Sweet and Lasting

We will assist you in your manufacturing problems, and will gladly send samples. Write to us.

PIERRE LEMOINE, INC.

200 VARICK STREET NEW YORK
Factory: LONG ISLAND CITY, N. Y.

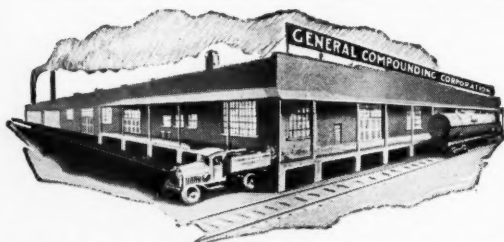
Chicago
Boston

St. Louis
Portland, Ore.

SECTOX

The improved liquid insecticide—

Are you, Mr. Distributor, getting your share of the tremendous volume of Liquid Insecticides now being sold? **Sectox** is just a few steps in advance, as a quality product, of any other similar one.



Our chemists have solved the problem of obnoxious odors, the aftermath of spraying.

SECTOX IS PERFUMED. It is 100% active, and offers distributors a liberal margin of profit. Made in all sizes.

**PINE OIL and COAL TAR DISINFECTANTS
CRESOL COMPOUNDS - LIQUID SOAPS
INSULATING COMPOUNDS - INSECTICIDES**

Territorial assignments for 1928 will be considered.

General Compounding Corporation

Central Avenue and 79th Place

(Glendale)

Brooklyn, N. Y.



Member



Say you saw it in SOAP!

Trade Marks Granted

(From Page 83)

April 26, 1928. Serial No. 265,449. Published June 12, 1928.

245,984—Shampoo. McKesson & Robbins, Incorporated, Bridgeport, Conn. Filed March 20, 1928. Serial No. 263,497. Published June 12, 1928.

246,007—Deodorant. McKesson & Robbins, Incorporated, Bridgeport, Conn. Filed April 6, 1928. Serial No. 264,452. Published June 12, 1928.

246,034—Disinfectants and deodorizers. Joseph Christopher Shepard, Wilmington, N. C. Filed April 30, 1928. Serial No. 265,698. Published June 12, 1928.

246,145—Roach Powder. Gerrit Peters, doing business as Peters Chemical Company, Detroit, Mich. Filed April 23, 1927. Serial No. 247,906. Published July 5, 1927.

246,538—Floor Polish. Hillyard Chemical Company, St. Joseph, Mo. Filed April 16, 1928. Serial No. 264,881. Published June 19, 1928.

246,577—Deodorant. McKesson & Robbins, Incorporated, Bridgeport, Conn. Filed March 20, 1928. Serial No. 263,504. Published June 19, 1928.

246,621—Automobile Polish. Superla Laboratories, Inc., Chicago, Ill. Filed April 19, 1928. Serial No. 265,125. Published June 26, 1928.

246,734—Disinfectants. Rockland Chemical Co., Newark, N. J. Filed May 4, 1928. Serial No. 265,930. Published June 19, 1928.

246,764—Disinfectant. Cedarwood Fumitours Corporation, Atlanta, Ga. Filed May 12, 1928. Serial No. 266,299. Published June 26, 1928.

246,765—Liquid Insecticide. Sloan Chemical Company, Incorporated, St. Paul, Minn. Filed May 11, 1928. Serial No. 266,278. Published June 26, 1928.

246,766—Household Insecticide and deodorant. Bonide Chemical Co., Utica, N. Y. Filed May 8, 1928. Serial No. 266,079. Published June 26, 1928.

246,898—Soap Flakes. The Procter & Gamble Company, Cincinnati, Ohio. Filed April 28, 1928. Serial No. 265,561. Published June 19, 1928.

246,939—Toilet Soaps and Shaving Soaps. Societe Anonyme Donge, Courbevoie, France. Filed May 11, 1928. Serial No. 266,280. Published June 19, 1928.

246,942—Disinfectants. Frank B. Nobrega, doing business as Central Chemical Company, Kansas City, Mo. Filed May 12,

in BULK for REPACKERS

Furniture Polish

A preservative, cleaner and polish with high wax content. Not gummy or sticky. One of the largest polish manufacturers retails this same product at \$4.50 a gallon. Our bulk price to you is considerable under one-third of this figure, with freight allowed. Write for generous sample and quotations and advise your approximate annual requirements.

Metal Polish

Non-inflammable and free from acid. Meets U. S. Government Master Specification 341. Contains over 30% solids which will stay in suspension for weeks. Price is low enough to enable you to meet any competition and still make a good profit. Buy from us at less than your own manufacturing cost. Freight allowed. Ask for samples and proof of these statements.

Also Makers of Bulk or Private Brand

Deodorizing Blocks

Insecticide

Boiler Leak Compound

Deodorizing Crystals

Disinfectants

Drain Pipe Solvent

Producers of INSECT POWDER from STRICTLY CLOSED FLOWERS

GOULARD & OLENA, INC.

Office

140 Liberty St., N. Y. City

Phones

Rector 5889-2843

Factory

Jersey City, N. J.

K R A N I C H

Liquid Soap Base

65% Anhydrous

Liquid Soap Syrup

45% Anhydrous

Standard articles to produce
Excellent Liquid Soap
in

NATURAL - COLORED - PERFUMED
OR UNPERFUMED

*Descriptive pamphlet on making excellent
liquid soap from the Base and Syrup.*

Pine Scrubbing Soap

20% Anhydrous

Potash Soap

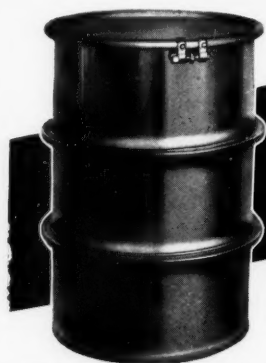
Soft - Hard

U.S.P. IX and X.

*Let us send you samples and our
complete price list.*

KRANICH SOAP CO.

54 RICHARDS ST., BROOKLYN, N. Y.



For
Easy
Cleaning
—
For
Products
That
Congeal.

THE NEW HACKNEY STEEL DRUM

With Full Removable Head

Easy to empty and clean—easy to handle—built to give years of service—the new Hackney Removable Head Steel Drum cuts handling costs—cuts shipping costs—and improves service. The new bulletin contains complete information. Write for your copy today.

PRESSED STEEL TANK COMPANY

Hackney
MILWAUKEE

1159 Continental Bank Bldg. Chicago
1335 Vanderbilt Concourse Bldg. New York City
5739 Greenfield Ave. Milwaukee, Wis.

*Let Your Product
Ride to
Success
on Acme Sprayers*

A sprayer that co-operates with your product is a decided advantage in merchandising insecticides, repellants, etc. The better the sprayer, the better they like your product.

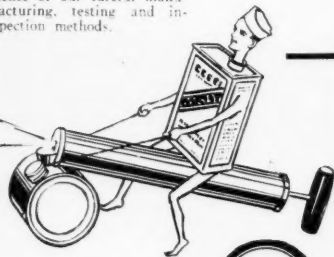
Our fifty years' experience, large factory and efficient production facilities, not only insure you the kind of a sprayer you want, but accord prompt attention to your orders always.

If our large line does not include the type of sprayer you want, we will design a sprayer made to your specifications—and it will be RIGHT.

Write for samples and prices.

POTATO IMPLEMENT CO. - Dept. 00 - Traverse City, Mich.

Acme Sprayers for years have been sold under a money-back guarantee—evidence of our careful manufacturing, testing and inspection methods.



4 Distinct Improvements

Our No. 200 Sprayer has a Drip Cup which keeps the liquid from dripping on the floor or person; air and spray tubes are co-ordinated to produce a mist or fog that hangs in the air longer; special processed leather plunger cup takes hold instantly and gives full spray volume; vent in can screw prevents siphoning when not in use.

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1928. Serial No. 266,327. Published June 26, 1928.

246,952—Polishing preparation for glass. Reckitt & Sons, Limited, Hull, England. Filed May 15, 1928. Serial No. 266,440. Published July 3, 1928.

246,954—Dry Cleaner for and a polish for metals. Old Master Laboratories, Inc., New York, N. Y. Filed November 21, 1927. Serial No. 257,890. Published January 17, 1928.

246,955—Shaving Cream Shampoo. The Mentholatum Company, Wichita, Kans., and Buffalo, N. Y. Filed November 19, 1927. Serial No. 257,808. Published July 3, 1928.

246,982—Washing Fluid. B. R. M. Company, Royal Oak, Mich., assignor to Rocco Brothers, Royal Oak, Mich. Filed March 17, 1926. Serial No. 228,731. Published June 19, 1928.

246,999—Soap. Mart Guild Incorporated, New York, N. Y. Filed May 3, 1928. Serial No. 265,850. Published June 19, 1928.

247,021—Cleaning Fluid for gloves, silks, etc. Annabell H. Beggs, doing business as H-O Chemical Company, Denver, Colo. Filed May 16, 1927. Serial No. 249,039. Published October 25, 1927.

247,026—Toilet Soap. Charles A. Crary, Wyoming, Cincinnati, Ohio. Filed April 5, 1928. Serial No. 264,362. Published June 26, 1928.

247,070—Cleaning Fluid. Elmer G. Turcotte, doing business as Premier Laboratories, Providence, R. I. Filed May 7, 1928. Serial No. 266,061. Published June 26, 1928.

247,082—Household Cleansing Preparation. William Earl Bauer, doing business as Bauer & Bauer, Norristown, Pa. Filed January 5, 1928. Serial No. 259,707. Published July 3, 1928.

247,083—Household Cleansing Preparation. William Earl Bauer, doing business as Bauer & Bauer, Norristown, Pa. Filed January 5, 1928. Serial No. 259,706. Published July 3, 1928.

247,100—Cleaning Preparation. The Midland Chemical Laboratories, Inc., Dubuque, Iowa. Filed December 16, 1927. Serial No. 259,011. Published February 14, 1928.

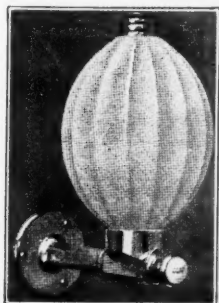
247,134—Shaving Soap. McKesson & Robbins, Incorporated, Bridgeport, Conn. Filed May 9, 1928. Serial No. 266,140. Published June 19, 1928.

247,135—Cleaning Preparation. Langdon Caskin, doing business as The SaniBel Company, Devon, Pa. Filed May 9, 1928. Serial No. 266,125. Published June 19, 1928.

The Why and the Wherefore of Soaperior Dispensers

In its precision manufacture lies the secret of Soaperior Soap Equipment's merchandising power. Its handsome appearance induces sales—its ability to "stand up" under hard wear creates good will and permanent customers. Soaperior Model #121 Dispenser harmonizes

with the finest lavatory fixtures—but its beauty of line conceals rugged construction, perfect mechanism. The one piece bracket which holds the Soaperior Valve is made of white metal, beautifully nickel plated. The globe, mounted on the dispenser, holds 18 ounces of soap. It may be of opalescent or crystal glass.



The Soaperior Valve is the "heart" of the Individual Dispensers and Gravity System alike. It is the secret of this equipment's impregnability to hard wear. An examination of its underlying principles explains the operating efficiency of the Soaperior Equipment. The

The heart
of the
Soaperior
System.



valve incorporates patented cone type shut-off—a positive protection against leakage. Continuous flow of the soap is prevented. The patented union holds unusual pressure and acts as a shut-off cock, permitting removal of the body of the valve for cleaning. White metal construction, chromium plated finish, prevents corrosion and insures long service.

Economy in the discharge of soap, perfect operating efficiency—are the features which will "sell" your customer. Our guarantee against mechanical trouble and "griefts" will surely interest you.

Manufacturers in bulk of

Olive and Coconut Oil Soap Bases
Liquid Scrubbing Soaps
Liquid Toilet Soaps, etc.

**U. S. SANITARY SPECIALTIES
CORPORATION**

435-41 So. Western Ave., Chicago



Not like
ordinary
sprayers

The Robertson Compressed Air Sprayer

This is the *first* and *original* continuous sprayer ever put on the market. They are universally conceded to be the best ever made. Built from the highest quality of material and guaranteed to be perfect in operation and workmanship. All sprayers tested before leaving factory. Prices mailed on request.

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KING & HOWE

IMPORTERS MILLERS

CRUDE DRUGS
(K&H)

Insect Powder

NOT BRANDED
NOT MIXED

Three varieties—closed Dalmatian, half-closed Dalmatian and Japanese. Impalpable powder or coarse mesh, ground by our own mills.

Insect Flowers

Allow us to quote you direct from the go-downs of Japan and the interior collecting centers of Dalmatia.

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"Headquarters for Bulk Buyers"

Kill Him & Save Money

HAVE you ever figured out in dollars and cents the loss you sustain each year by the ruthless destructiveness of Rats and Mice? You can totally wipe out this big item by the use of RATIN, which for 25 years has been successfully and safely used to eradicate these pests. Among the thousands of users



FREE

Ask for free information on how to eliminate all Rats and Mice. State degree of infestation and area requiring treatment.

are the Municipalities of New York, Chicago, Philadelphia, Detroit, Newark, Memphis, New Orleans and other cities, besides the most prominent manufacturers and institutions in America and Europe. RATIN is unlike any other preparation; it is guaranteed harmless; it is absolutely reliable, it never fails.

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116 Broad Street
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CRESYLIC ACID

All Grades

CREOSOTE OILS

**Cresol
U.S.P.**

Specially prepared for
disinfectant manufacturers.

**Phenol
U.S.P.**

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WM. E. JORDAN & BROTHER, 2590 Atlantic Ave., Bklyn., N. Y.
Mechanics Bank Bldg. Telephone Glenmore 7318-7319

Say you saw it in SOAP!

Market for Insecticides in Persia

Although there is no record of Persia's imports of insecticides, it is known that they constitute a very small portion of the total of \$400,000 worth of miscellaneous drugs and chemicals imported in 1927. To date, the Persian has exhibited little interest in freeing his home of the abundant insect life that usually centers around it. American and European residents of Persia at present afford the sole market. They probably do not number more than 4,000 or 5,000. Potentially, however, Persia is a good market for insecticides. Within the cities and villages the water supply, derived from mountain snows, invariably is at the surface. Every garden contains a reservoir from which the family's supply of water is drawn. These pools, stagnant for approximately a week at a time, are breeding places for mosquitoes during eight months of the year. Malaria is epidemic; typhoid is epidemic. Throughout the long and hot summer the house-fly is a source of irritation second only to the swarms of sand-flies whose sting is painful and frequently results in fever. Cockroaches and bed-bugs are seldom met with, but ants, fleas, and lice are common, the two last among the poorer classes only.

An educational campaign should enlarge the

Persian market, but the expense of the product laid down at an inland point will tend to limit sales. All transport is by mule or caravan, or by motor truck when the merchandise is of high unit value. An insecticide of Australian manufacture retails, in Teheran, for \$3 per quart bottle; an American insecticide, imported for the first time last summer, retails at \$2.25 per quart tin. The Persian refuses to buy at such prices; the foreign resident purchases only enough to make life more bearable during the summer. If an insecticide can be exported from the United States in powder form, or, if it is a liquid, in quart, two quart, or gallon tins, it probably could be marketed in Persia with moderate success. Few Persian firms have facilities for covering the entire country, hence it has been found advantageous to appoint one agent for the Persian Gulf district, one for north and central Persia, and one for the Caspian district. (Vice Consul David Williamson, Teheran.)

A. M. Todd Co., Kalamazoo, Mich., producers of essential oils and aromatic chemicals, announce the appointment of A. J. Dedrick as their Chicago representative with office at 500 North Dearborn St.

Sprayoced the Cedar-scented Insecticide

A most effective liquid insecticide spray—furnished in cans or drums

*A can
or
a carload*

F. O. B.
Kearny
New Jersey



THE WHITE TAR COMPANY
of New Jersey, Inc.

Belleville Turnpike

Kearny, New Jersey

PERCOLATORS

(Any Size)

**50 Gallon Size
\$35.00 Complete**

Made from
ARMCO INGOT
GALV. IRON

Also

**TANKS
TUBS
PAILS
ETC.**



*We make anything you need in the
Special Line in Copper, Monel Metal,
Armco Galv. Iron, etc.*

FARLINGER-RICE CO.
EAST ORANGE, N. J.

POWCO

REG. U.S. PAT. OFF

HIGH TEST INSECT POWDER

Purity alone is *NOT* sufficient.

You must have *high Killing Power.*

... JOHN POWELL & CO., INC. 114 E. 32ND ST., NEW YORK ...

*Does Mixing
Quicker appeal to you?*

DISINFECTANTS
CATTLE DIP
INSECTICIDES
SPRAYS
DEODORANTS
POLISHES
SOAP FORMULAS
CLEANING FLUIDS
OILS & ETC.



*All sizes and speeds
Clamp on any tank,
barrel, kettle, etc.*

LIGHTNIN

Portable Electric Mixers will mix any product that will flow — quicker—better—cheaper.

SIMPLE - SANITARY - DEPENDABLE

Write for Folder 39

MIXING EQUIPMENT CO., Inc.

229 East 38th St. New York, N. Y.

5 Reasons for buying NON-PAREIL DRIP MACHINES



1. Brass bottoms on inside and outside cans — will not rust.
2. Reversible bottoms.
3. Rust resisting finish.
4. May be filled without funnel.
5. Sold only to the trade.

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"Nothing takes the place of Drip Machines"

John C. Wiarda & Co.

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Manufacturers

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Acids - Alkalies - Salts - Insecticides

SODIUM FLUORIDE

Fluffy - Extra light - Free flowing - 95% Pure

of our own manufacture

SILEX

SOAP FILLERS

Send for Samples

Say you saw it in SOAP!

Testing Liquid Insecticides

(From Page 99)

cause of a scarcity of suitable food. In all about forty-four days are spent in the larval stage. When the larvae are about to pupate the larval skin splits down the back and remains as a pupal covering. On the last larval skin a number of spines occur serving as a protection for the pupa. The larvae are negatively phototropic and are generally found in dark places. Illingworth observed that the larvae are fully developed after the sixth moult and that the complete larval period for the seven instars was found to require fifty days, while the life cycle from egg to adult, was passed in sixty-four days which is somewhat longer than we have observed.

The pupal stage lasts seven or eight days. After the imago emerges it passes through a preoviposition period of about ten days. The adult beetle is from 8 to 12 mm. in length and rather slender, the male being smaller than the female. The antennae are short, terminating in a large club and on the underside of the thorax is the characteristic hollow for their reception. The elytra and dorsal surfaces of the prothorax and head are black specked with gray. The margins of the thorax are covered with grayish scales. The ventral surface is of a silvery-white color with a series of lateral spots which appear to be bluish-black because of the absence of scales. The adult is a weak flier seldom making use of its wings and then only for short flights. It is very quick on its feet and will run rapidly to cover if disturbed. However, it is much easier to handle in this respect than a cockroach. The adult beetle has a life span of four or five months or more and

reproduces over a period of two months at least. According to Illingworth, "Beetles that emerged Jan. 2, 1917, are still alive and actively reproducing April 5, 1917."

(To be Concluded)

McCormick Showing New Films

McCormick & Co., Baltimore, are now showing a number of new industrial moving pictures covering various types of products which the firm manufactures. At schools, clubs, wholesale and retail grocery meetings, several of their pictures showing the growing, shipping, preparation and packaging of teas and spices are being shown this year. Their new animated cartoon film, "Bee Ware," produced by the Bray Laboratories for McCormick & Co. is a comedy picture on the danger of insects as disease carriers, and the elimination of insects by the use of modern insecticides. The picture on "The History of Spices" covering from the growing down to the modern grinding, cleaning, packing is also a popular film much in demand at present.

Southern Wholesale Drug Co., High Point, N. C., has started in business under the management of B. F. Cox, formerly located in Chicago.

DISINFECTANTS - INSECTICIDES - FLY SPRAYS - SOAPS METAL POLISH - ROOF COATINGS

We sell large quantities of these products to leading jobbers who find it cheaper to buy from us than to manufacture themselves. Drop shipments made under your own name and brand. Why not investigate our proposition? There's no obligation whatever. Write us for complete information and prices today.

THE CHEMICAL SUPPLY COMPANY

2450 Canal Rd.,
CLEVELAND, OHIO.

PYRETHRUM

Bulk Insecticides a Specialty — also
Concentrated Extract of Pyrethrum

IF your problem concerns pyrethrum in any form—
our analytical and research laboratories are at your
service.

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DEPENDABLE - GUARANTEED - SERVICE

by leaders in Pyrethrum Products for almost half a century.



McCORMICK & CO. INC BALTIMORE
MARYLAND

HEADQUARTERS FOR GOOD USED SOAP MACHINERY

*Overhauled, Rebuilt and Tested in our Modern Machine Shop at
our Plant and Warehouse, Newark, N. J. Inspection Invited.*

ATTRACTIVE PRICES — IMMEDIATE SHIPMENT

Space does not permit listing every item in stock. Write for items not yet listed.

- | | |
|--|--|
| 2—Proctor & Schwartz Soap Chip Dryers,
1200# capacity. | 2—Broughton Mixers, size A-2, 1/2-ton. |
| 1—H-A 5-roll Steel Soap Mill, 14x36. | 1—Broughton Mixer, size A-1, 1-ton. |
| 2—Huber Granite 3 roll Mills 10"x24". | 2—Jones A Automatic Soap Presses. |
| 1—H. A. Granite 3 roll Mill, 12"x24". | 5—Soap Chippers, 22", 24" and 30". |
| 9—Crutchers, 3600, 3000, 1500, 600 lb.
capacity, Dopp, Doll, Houchin-Aiken. | 20—Filter Presses, 12", 18", 24", 30",
36" and 42". |
| Miscellaneous Soap Cutters, Slabbers, Plodders, Foot Presses, Jacketed Kettles, Tanks,
Mixers, Fillers, Pumps, etc. | 200—Soap Frames, 1500#, 1200# and
600# capacity. |
| | 5—Soap Grinders H. A. and Blanchard. |

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At very attractive prices — Every piece listed is in stock for immediate shipment.

Dryers

- Two Proctor & Schwartz Large Roll Soap Chip Dryers complete.
- Three Proctor & Schwartz Soap Chip Dryers with five Chilling Rolls.
- Proctor & Schwartz Bar Soap Dryers.
- Condon & Huber Soap Chip Dryers.

Soap Crutchers

- Houchin-Aiken, Dopp & Doll Steam Jacketed Crutchers, 1000#, 1200#, 1350#, 1500#, 1800#, 3000#, 6000#, & 10000# cap.
- Crutchers for floating soaps.

Soap Presses

- Jones, Machinery Designing & Ralston Automatic Presses for toilet and laundry soap.
- Dopp, Crosby & Empire Foot Presses.
- Scouring Soap Presses.

Grinders & Mixers

- Day Jacketed Marshmallow Mixers, Pony Mixers, Talcum Powder Mixers, Rouge Mixers, Ointment Mill, etc.
- Schultz O'Neill Mills.

Soap Cutting Tables

- Houchin-Aiken Steel Automatic Table with self-spreader & extra headers.
- Wooden Tables with and without self-spreader attachments.

Soap Slabbers

- Houchin-Aiken, Curtis-Davis, Dopp & Newman's Hand and Power Slabbers.

*Send us a list of your surplus equipment.
We buy single items or complete plants.*

Toilet Soap Mills

- 2, 3, 4, 5 and 6-roll Granite Toilet Soap Mills.
- Houchin-Aiken 4 and 5 roll Steel Mills.

Plodders

- Houchin-Aiken, Rutschman & Albright-Neil 6", 8" & 10" Plodders.

Soap Powder Machinery

- Blanchard #10-A & #14 Soap Powder Mills.
- Broughton Soap Powder Mixers.
- Wm's Patent Crusher & Pulverizer.
- Sedberry Crusher, Grinder & Pulverizer.
- A-N 5x7 Crystallizing Rolls.

Filter Presses

- Sperry, Perrin & Shriver Cast Iron Filter Presses, 12", 18", 24", 30" & 36".
- International & Monopod Filters.

Various Other Items

- Wm. Garrigue Glycerine Evaporators.
- Steel Soap Frames, 600#, 1000#, 1200#, 1500#, & 1800# cap.
- Automatic Soap Wrapping Machines.
- Steel, Copper & Aluminum Kettles.
- Soap Remelters, Tube Fillers.
- Filling & Weighing Machines.
- Pneumatic Scale Corp. Can Filling Machine for cleansers, etc.
- Brass Soap Dies for foot & aut. Presses.
- Soap Chippers, Scales, Motors, Amalgamators, Soap Racks, Bottle Filling & Capping Machines, Talcum Can Crimpers, etc.

In business over 40 years — Call on our service department for assistance in your soap problems.

NEWMAN TALLOW & SOAP MACHINERY CO.

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Say you saw it in SOAP!

Not a Soap Filler, but a colloidal chemically combined ingredient of soaps and cleaning compounds, used extensively in this country and abroad. Write for samples and prices of our Wyoming Bentonite. Acme Oil Corp., 189 North Clark St., Chicago, 324.

Formulas for Polishes, Cleaning Compounds, Hand Pastes, Liquid Soaps, Washing Compounds and Tablets, Automobile Specialties, Insecticides, Flavors, Toilet Preparations, etc. Catalog and circulars free. H. Thaxly Co., Washington, D. C.—320.

A New Product?—Are your soap products satisfactory and meeting the present day requirements? Do you want to add a new product? Consult and receive an expert's advice and services. Correspondence confidential. Address Box 325, care SOAP.

Manufacturing Chemist—Chemist with lots of experience desires salesman with fol-

lowing as partner for manufacturing soaps, sanitary chemicals, insecticides, and cleaning supplies. Address Philadelphia, Box 314, care SOAP.

Chemist Wanted—Assistant chemist required in soap works laboratory (Toronto); knowledge of Glycerin analysis essential. State experience and salary expected. Address Box 328, care SOAP.

Charles V. Sparhawk Corp., Newark, N. J., essential oil merchants, have been petitioned into bankruptcy on a complaint entered by Theodore Connet, Newark, and the Dow Chemical Co., Midland, Mich. A hearing was held Oct. 9, at the Chancery Chambers, Industrial Office Bldg.

Emile Schlienger, senior partner of Bertrand Freres, Grasse, France, and P. R. Dreyer, New York, American representative for the house, recently visited the principal cities of the East and Middle West together in behalf of their mutual interests. Mr. Schlienger arrived in the United States on Sept. 18.

SILICATE OF SODA

in various grades

Stocks always carried to supply your needs at the cheapest prices direct from the manufacturers.

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vorm. Holl & Sthamer A. G.

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Long experience enables us to produce colors for all types of soaps.

If you have a shade you want matched send us a sample. We have complete facilities for matching.

Liquid soap colors a specialty — send for samples of F. & S. greens and ambers.

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205 Fulton Street New York
Import - Manufacture - Export

PUMICE

We import a powdered pumice stone from Italy which, though not as pure and evenly ground as the American Ground Italian Pumice Stone, we recommend for use in hand pastes and soaps where a less expensive abrasive is required.

for all grades in bags
\$35.00 PER TON
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Raw Material and Equipment Guide

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M. A. Boet Co.
Franks Chemical Products Co.
Hammill & Gillespie, Inc.
National Pumice Stone Co.
Tamms Silica Co.
John C. Wiarda & Co.

CHEMICALS

Bowker Chemical Co.
Chemische Fabrik in Billwader
Diamond Alkali Co.
Dow Chemical Co.
Grasselli Chemical Co.
Hooker Electrochemical Co.
Mathieson Alkali Works
Mechling Bros. Chemical Co.
Merck & Co.
Michigan Alkali Co.
Monsanto Chemical Works
Newport Chemical Works
Niagara Alkali Co.
Parsons & Pettit
Philadelphia Quartz Co.
Solvay Sales Corp.
Truempy, Faesy & Besthoff
Victor Chemical Works
Welch, Holme & Clark Co.
Isaac Winkler & Bro. Co.

COAL TAR PRODUCTS

Baird & McGuire, Inc.
William Cooper & Nephews
Dominion Tar & Chem. Co.
Wm. E. Jordan & Bro.
Tar Acid Refining Corp.
White Tar Co.

CONTAINERS

American Can Co. (Cans)
Bemis Bros. Bag Co. (Bags)
Container Corp. of Amer. (Corr. & Fibre Boxes)
Continental Can Co. (Cans)
John Trageser Steam Copper Works (Steel)
Metal Package Corp. (Cans)
Ohio Pail Co. (Steel Pails)
Pressed Steel Tank Co. (Steel)
William Vogel & Bro. (Cans)

EQUIPMENT, MISCELLANEOUS

Alsop Engineering Co. (Storage Tanks)
Anthony J. Fries (Soap Dies)
George G. Rodgers Co. (Conveyors)
Sanitary Supplies Co. (Deodorizing Block Holders)
C. T. Small Mfg. Co. (Portable Trucks)
William Vogel & Bro. (Deodorizing Block Holders)

MACHINERY, PACKAGING

Johnson Automatic Sealer Co.
National Packaging Machinery Co.
Package Machinery Co.
Pneumatic Scale Corp.

Geo. G. Rodgers Co.
Stokes & Smith Co.

MACHINERY, LIQUID HANDLING

Alsop Engineering Co.
Karl Kiefer Machine Co.
Mixing Equipment Co.
Pneumatic Scale Corp.
George G. Rodgers Co. (Pastes)
C. T. Small Mfg. Co.

MACHINERY, PROCESS

Crowell Mfg. Co.
William Garrigue & Co.
Houchin-Aiken Co.
J. M. Lehmann Co., Inc.
Proctor & Schwarz, Inc.
C. G. Sargent's Sons Corp.
Sowers Mfg. Co.
Wurster & Sanger, Inc.

MACHINERY, USED

Consolidated Products Co.
Newman Tallow & Soap Machinery Co.

MATERIALS, MISCELLANEOUS

B. & W. (Lanolin and wool grease)
Darco Sales Corp. (Decolorizing Carbon)
Glidden Food Prods. Co. (Decolorizing Carbons)
Hercules Powder Co. (Pine Oil and Rosin)
Merck & Co. (Chlorophyll and Lanolin)
Pfaltz & Bauer (Lanolin, Fluorides, Chlorophyll)
Rohm & Haas Co. (Insecticide)
John C. Wiarda & Co. (Fluorides)

METAL CAPS

American Metal Cap Co.
Williams Sealing Corp.

PERFUMING MATERIALS

Antoine Chiris Co.
Dodge & Olcott Co.
Dow Chemical Co.

